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VALUES OF HIGH SCHOOL STUDENTS AND THEIR TEACHERS.
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THIS STUDY WAS DESIGNED TO PROVIDE INFORMATION ON THE PERSONAL VALUES OF HIGH SCHOOL STUDENTS AND THEIR TEACHERS. EVIDENCE OF CHANGES IN PERSONAL VALUES AND VALUE PATTERNS WERE SOUGHT IN AN ATTEMPT TO REVEAL IMPACTS FROM TEACHERS, CERTAIN SOCIOECONOMIC AND PSYCHOLOGICAL FACTORS, AND EDUCATIONAL OBJECTIVES. STUDENTS WERE TESTED AS FRESHMEN, SOPHOMORES, AND SENIORS TO IDENTIFY AREAS OF CHANGE IN VALUE ORIENTATION. ALSO STUDIED WAS THE RELATIONSHIP OF VALUES TO FRIENDSHIP PATTERNS AND THE ABILITY TO COMMUNICATE. IT WAS CONCLUDED THAT (1) CONDUCTING LONGITUDINAL STUDIES OF STUDENT CHARACTERISTICS IN THE MODERN HIGH SCHOOL WAS POSSIBLE WITHOUT UNDUE INTERRUPTION OF THE SCHOOL'S EDUCATIONAL PROGRAM, (2) PERSONAL VALUES WERE QUITE STABLE BY THE TIME STUDENTS ENTER HIGH SCHOOL, (3) PERSONAL VALUES OF HIGH SCHOOL STUDENTS WERE DEFINITELY RELATED TO THEIR OCCUPATIONAL CHOICES, ACADEMIC ACHIEVEMENT, EDUCATIONAL OBJECTIVES, AND PARTICIPATION IN RELIGIOUS ACTIVITIES, (4) ABILITY OF STUDENTS TO UNDERSTAND THEIR TEACHERS WAS NOT RELATED TO THEIR PERSONAL VALUE PATTERNS, AND (5) PERSONAL-VALUE PROFILES OF TEACHERS WERE RELATED TO THEIR SUBJECT-MATTER SPECIALIZATION, AGE, AND RELIGIOUS PARTICIPATION. (LP)

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VALUES OF HIGH SCHOOL STUDENTS AND THEIR TEACHERS

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University of California

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CHAPTER I

INTRODUCTION

PROBLEM

Throughout history, society has been concerned with transmitting to the younger generation the values approved of by the culture, and maintaining these values in adults. The values of adolescents are the concern of society today perhaps more than ever before. Of girls aged 15 to 18 today, 40 percent are married; and half of these marriages will terminate in divorce within five years. Forty percent of the children born out of wedlock have mothers between the ages of 15 and 19, a threefold increase since 1950. These facts cause adults to reconsider the traditional value systems. Many believe that time-honored values are being eroded. Even though values are discussed copiously and many studies have attempted to measure values, surprisingly little is actually known about when and how youth gains its values. Contributing to this dilemma is a confusion surrounding the definition of values: there are nearly as many definitions as there are persons concerned with the study of values. Some consider values as attributes of either people, objects, individuals, or groups; others see values as conscious and verbalized standards of the individual, as desires or obligations, or as basic general standards, tendencies of choice, or specific preferences. The definition of values, which is the basis for this study, comes from works by Getzels,[1] who built his philosophy upon writings of Kluckhohn.[2] The latter wrote: "A value is a conception, explicit or implicit, distinctive of an individual or characteristic of a group, of the desirable which influences the selection from available modes, means, and ends of action." Kluckhohn sees the desirable as being that which it is felt or thought to be proper to want. In operation terms, then, values are actually what is cherished by the individual. Getzels divided personal values into two major categories, social and secular. Spindler[3] further refined secular values into four categories based upon tradition, and four which characterize the emerging society. This study uses this traditional-emergent concept of values formulated by Spindler.

Very little research has been done to determine precisely when values become fixed within an individual. Research does suggest that values don't change during a student's college years; that, by early adulthood, values become set within the individual; and that no change is apparent in adult life. Throughout life, values govern behavior directly or indirectly. When the environment is such that value-directed behavior is not appropriate, the individual, by a change in attitudes, usually adjusts satisfactorily to the situation. By this change in attitude the individual effects a compromise between his values and expected behavior. When the environment again permits, the individual tends to revert to value-directed behavior. Society, and the educator in particular, must learn more about how and when values are perceived if the values that youth develops are to be influenced. Since interiorization of values may begin in the preschool years and become fixed by late adolescence, the critical time of value development is that time when young people are shared by the school and the family. If the school is to fulfill its obligation in assisting the family in molding young people with culturally approved values, knowledge of the role of the teacher in value formation is critical.

This study was designed to provide information on the personal values of high school students and their teachers. Students were tested as freshmen, sophomores, and seniors, to identify areas of change in value orientation. The role of the teacher in value formation was studied by comparing their test results with those of their students. Also studied was the relationship of values to friendship patterns and the ability to communicate.

The primary purpose of the study was to determine whether personal values of students change during high school, and to determine whether value patterns reveal an impact from teachers, certain socio-economic and psychological factors, and educational objectives.

OBJECTIVES AND HYPOTHESES

Data were collected to achieve the following objectives:

a) To determine whether personal and/or occupational value patterns change during high school;

b) To determine whether the ability of teachers and students to communicate with each other is related to their value patterns;

c) To determine whether friendship patterns within high school classes are related to personal values of students;

d) To determine whether value patterns of students are influenced by certain socio-economic factors, psychological factors, and educational objectives.

The following hypotheses are tested: (1) there is no difference in personal and occupational values between high school students:

a) as freshmen and as seniors;
b) in different high schools;
c) with many friends and with few friends within their class;
d) who chose each other as best friends;
e) stratified by certain socio-economic and psychological factors;
f) and teachers whom they understand readily and those less easily understood;

and (2) there is no difference in the personal and occupational values of teachers:

a) who teach in different subject areas;
b) with short and long tenure in the profession;
c) with high and low participation in religious activities;
d) who are readily understood and those less easily understood by students.

References

1. Getzels, Jacob W., "The acquisition of Values in School and Society," The High School in a New Era, Francis S. Chase and Harold A. Anderson, editors (Chicago, Illinois: University of Chicago Press, 1958).
2. Kluckhohn, Clyde, "Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification," Toward a General Theory of Action, Talcott Parsons and Edward A. Shils, editors (New York: Harper & Row, Torchbook Edition, 1962).
3. Spindler, George D., "Education in a Transforming American Culture," Harvard Educational Review, Spring, 1955, 25:145-156.

CHAPTER II

REVIEW OF LITERATURE

The literature contains many definitions of human values. Kierkegaard[16] sees a value as "that which I hold precious, for which I would sacrifice and ultimately die." Aberle[1] says, "By a value is meant an effectively charged idea or attitude in terms of which objects, events, actions, individuals, etc., are judged on a scale of approval-disapproval, whether the approval and disapproval are moral, aesthetic, hedonic, or in terms of some other dimension." Kluckhohn,[17] in discussing the study of values as the science of preferential behavior, says: "A value is not just a preference, but is a preference which is felt and/or considered to be justified--'morally' or by reasoning or by aesthetic judgment, usually by two or all three of these." English and English[9] define values as ". . . the worth or excellence, or the degree of worth, ascribed to an object . . . (and) reacted to as if external or objective, value is a function of the valuing transaction, not of the object . . . abstract concepts of worth are usually not the result of an individual's own valuing; they are social products . . . imposed on him and only slowly internalized."

While authorities differ on the precise definition of values, no one questions the extreme importance of values in the psychological and emotional makeup of the individual. Values are learned and, once interiorized, serve as a frame of reference guiding action and behavior. Often this frame of reference will have more effect upon judgment than does analysis of facts, for facts are usually recognized only to the point where they conform to the individual's highly personalized value system. In many instances, life laughs at logic.

Personal and occupational values are learned. The exact source from which the individual learns his values is not precisely known. The interiorizing of values is believe to be gradual and to approach the adult cultural norm in a slow but steady fashion, gaining in consistency with increased age. Children undoubtedly acquire their initial values from their immediate culture on the basis of imitation as well as precept. From a study of young children, Goodman[11] concluded that four-year-olds have already developed some basic values, particularly of what is good and what is bad, as well as interpersonal rights. From these values children develop patterns of attitudes which function more or less systematically in directing their thinking and behavior.

Though the home is recognized as a potent factor in molding the personality of children, the school is perhaps gaining in prominence for its contribution to value development. Entry into school is tending to be earlier, and curriculums are being enriched with value-oriented activities. Parental influence declines as the child grows older. Brown et al.[7] found that the family unit begins playing a less significant role in value formation between the ages of 10 and 16 years, when outside social factors become more important. In studying 277 delinquent boys and girls aged 9 to 14 years, Crane[8] found that before the age of 12 girls tended to identify with family members of the same sex, whereas boys chose heroes in sports and history. Beyond 12 years old, adults close to the family become the idols of boys, while girls identify with adults outside the circle close to the family. Allport and Kramer[2] found that only one-fourth of a sample of young people developed prejudices after 16 years of age. Most prejudices were found to have been developed between 6 and 16 years of age, especially between 12 and 16. Havighurst et al.[12] discovered that the self-concept of children is heavily influenced by association with adults who have positions of prestige. They found that teachers, clergy, and youth group leaders influenced the ideals of youth as much through their presence and behavior as by their verbal teaching. A summary by Jacob[15] of numerous studies on values of college students, and a later study by Lehmann and Payne,[19] both concluded that the formal academic aspects of college life have little if any impact upon student values, although certain extracurricular activities during college may effect value changes.

The general trend toward less parental contact that results from changes in family life and the strengthening of the social group as a force in value formation, adds to the significance of the role of the primary, elementary, and secondary schools. Teachers, then, as primary agents of the school, play an inescapable role--and they may become a strong negative, a neutral, or a strong positive influence by what they say, but perhaps an even more important influence by their behavior. This is strongly supported by the Havighurst and Taba study[13] of 1,300 16-year-olds who listed teachers over parents as most admired associates by a ratio of three to one. That teachers' values influence their teaching was confirmed by Bowie,[6] when she found significantly different verbal responses in the classroom between teachers with divergent value patterns: teachers with high social values tended to emphasize social implications more than did teachers with high political values. Prince,[22] Battle,[4] Lehmann,[18] and Thompson[25] all found that traditional values among students and teachers were significantly higher in parochial schools than in public schools, which also suggests that teachers may be contributing agents in value formation. In a study of 800 high school freshmen and seniors, Thompson[26] discovered that those with an orientation toward traditional values had a high interest in religious activities, received high grades, had definite future educational plans, and chose occupations with economic prestige.

The traditional frontier philosophy is changing, and there are many indications of that change. For example, youth today is vocal in confronting time-cherished moral and social value standards; and, as stated by Linton,[20] "Under the necessity of reorganizing our social structure to meet the needs of a new technology and of a spatial mobility unparalleled in human history, our inherited system of statuses and roles is breaking down; while a new system, compatible with the actual conditions of modern life, has not yet emerged." This change in values of youth has been partly validated by Pressey and Jones,[21] who found a very significant decline between 1923 and 1953 in the proportion of students who rated as morally wrong such concepts as extravagance, immodesty, and flirting: immodesty was held wrong by 70 percent of juniors and seniors in 1923, and by only 40 percent in 1953. The 50-year-olds in 1953 resembled the 1923 students more than the 1953 students. The 17-year study of adolescents by Remmers and Radler[23] gives further evidence of value changes in youth. From their polls they conclude that "A need and craving to be liked, drifting with the crowd, conformity, (and) a kind of passive anti-intellectualism . . . (these) seeme to be the outstanding characteristics of the present-day generation . . ."

Many educators and others would say (and this is an oversimplification) that the solution to the dilemma created by the behavior of modern youth is to return to the basic values held by the forefathers who made America great, i.e., the frontier hypothesis. Spindler's[24] answer is that ". . .shifts in values . . . (are) the conditions of life to which education and educators, whether progressives, experimentalists, conservatives, or in-betweens, must adapt--and to which they are adapting, albeit confusedly." He continues" ". . .it is clear that a major shift in American values has, and is taking place, (creating) . . . a transformation, and a rapid one producing many disjunctions and conflicts, from the traditional to the emergent . . . It is probable that both value systems have been present and operating in the

American Culture for some time . . . But recently, and under the impetus of World Wars (and) atomic insecurities . . . the heretofore latent tendencies in the emergent direction have gathered strength and appear to be on the way towards becoming the dominant value system of American Culture . . . The traditionalist views the emergentist as 'socialistic,' 'communistic,' 'spineless and weak-headed,' or downright 'immoral.' The emergentist regards the traditionalist as 'hidebound,' 'reactionary,' 'selfish,' or 'neurotically compulsive.' . . . The conflict goes beyond . . . institutions, because individuals in our transitional society are likely to hold elements of both value systems concomitantly." These views were further developed by Getzels,[10] who divides personal values into two categories--sacred and secular. Despite much controversy, the sacred values of democracy, individualism, equality, and human perfectibility have remained time-honored. These values are cherished and are openly taught to all youth. Spindler[24] identified the following as "secular," or everyday, operating values: (1) the work-success ethic--dedication to hard work; (2) future-time orientation--willingness to give up temporary pleasure for future gratification; (3) independence--autonomous self-protection from authority and from bureaucratic interference; and (4) Puritan morality--practicing thrift, self-denial, and sexual restraint.

Although the sacred values have been under much stress as our society progresses, they have remained relatively static. Both Spindler and Getzels observe that secular values of American culture are in transition, i.e., our social order is drifting from the once-cherished secular values. The transformation is from the work-success ethic to sociability as the way to advance; from future-time orientation to present-time orientation--present pleasures over deferred gratifications; from personal independence to group conformity--compliance rather than autonomous self; from Puritan morality to moral relativism--statistical rather than ethical morality.

The Spindler-Getzels concept of the transitional nature of personal values has given researchers a new approach to the study of values. Among those who are using the traditional-emergent concepts are Bidwell,[5] Lehmann,[19] Anderson,[3] Prince,[22] and Thompson.[26] Both Bidwell and Lehmann used college freshmen as subjects, whereas the others used high school students, and in two instances teachers were included. Slightly different instruments were used, but the findings tend to be consistent. Bidwell and Anderson used the Spindler value questionnaire, in which the respondent completes 24 theoretically-grounded sentence stems. Responses are coded as traditional, emergent, or uncodable. Lehmann, Thompson, and Prince used the Differential Value Inventory, initially developed by Prince. The instrument contains 64 pairs of forced-choice items, one item in each pair representing a traditional value and the other an emergent value. The test is designed to determine whether a person is committed to traditional values (work success, future-time orientation, independence, Puritan morality) or to emergent values (sociability, present-time orientation, conformity, moral relativism).

In discussing Spindler's competing value systems, Bidwell[5] stated: "The import of these data on values and status characteristics is that the genesis of T-E (traditional and emergent) values is not in the social structure (e.g., father's occupation), but in the cultural system (e.g., religion and ethnicity). To this extent, the Spindler instrument seems to tap quite generalized and pervasive value orientations."

This research was stimulated principally by studies of Prince and Battle of the personal values of high school students in the metropolitan area of Chicago. In his study Battle[4] found that grades earned by high school students were related to value patterns. Students having value patterns thought to be ideal by the teachers received significantly higher grades, even when aptitude, age, and sex were held constant. Conversely, students receiving low grades tended to have value patterns differing from the ideal established by the teachers. Battle concluded that the relationship between two persons tends to be compatible and productive in proportion to the degree to which the value patterns of the two are similar.

Prince,[22] also using high school students and their teachers, found that young teachers tended to choose emergent values as desirable. Older teachers had traditional values, as did older administrators. Superior students expressed traditional values, whereas low achievers were emergent in values. No differences in values were found between freshmen and seniors. However, students from parochial schools scored an average of 37 on the traditional scale, compared with means of 31 and 32 for private- and public-school students. Thompson[26] obtained somewhat similar results with a sample of 400 California high school students. However, he found California seniors to be less traditional than the Chicago seniors in Prince's sample.

The literature cited, and other studies too numerous to include, strongly suggest that the personal and occupational values of students are very important, yet little research has been truly concerned with attempting, even in a gross manner, to determine the time at which values really become fixed in the personality of the individual. This knowledge is critical to the educator concerned with the social, psychological, and academic development of children. Hemming[14] writes that schools can affect the acquisition of values in four main ways: by reinforcing desired values; by reducing the influence of undesirable values; by promoting a child's self-respect; and by helping him develop moral insight.

References

1. Aberle, David F., "Shared Values in Complex Societies," American Sociological Review, 1950, 15:495-502.

2. Allport, A. W., and Kramer, B. M., "Some Roots of Prejudice," Journal of Psychology, July, 1946, 22:9-39.

3. Anderson, C. C., "Response of Adolescents to American Tests of Value and Character," Canadian Education and Research Digest, December, 1961, 1:71-77.

4. Battle, Haron J., "Relation Between Personal Values and Scholastic Achievement," Journal of Experimental Education, September, 1957, 26:27-41.

5. Bidwell, Charles E., King, Stanley H., Finnie, Bruce, and Scarr, Harry A., "Undergraduate Careers: Alternatives and Determinants," School Review, Autumn, 1963, 71:299-316.

6. Bowie, Lucile B., "Relationship of Teachers' Personal Values and Their Verbal Behavior," Ed.D. thesis, University of Maryland, 1957.

7. Brown, Andrew W., Morrison, Joan, and Couch, Gertrude B., "Influence of Affectional Family Relationships on Character Development," Journal of Abnormal and Social Psychology, October, 1947, 42:422-428.

8. Crane, A. R., "Pre-Adolescent Gangs: A Socio-Psychological Interpretation," Journal of Genetic Psychology, June, 1955, 86:275-279.

9. English, Horace B., and English, Ava C., A Comprehensive Dictionary of Psychological and Psychoanalytical Terms (New York: David McKay Company, 1958).

10. Getzels, Jacob W., "The Acquisition of Values in School and Society," The High School in a New Era, Francis S. Chase and Harold A. Anderson, editors (Chicago, Illinois: University of Chicago Press, 1958).

11. Goodman, Mary Ellen, "Emergent Citizenship: A Study of Relevant Values in Four-Year-Olds," Childhood Education, February, 1959, 35:248-251.

12. Havighurst, Robert J., Robinson, Myra Z., and Door, Mildred, "The Development of the Ideal Self in Childhood and Adolescence," Journal of Educational Research, December, 1946, 40:241-257.

13. Havighurst, Robert J., and Taba, Hilda, Adolescent Character and Personality (New York: John Wiley & Sons, 1949).

14. Hemming, James, "Symposium: The Development of Children's Moral Values. I.--Some Aspects of Moral Development in a Changing Society," British Journal of Educational Psychology, 1957, 27:77-88.

15. Jacob, P. E., "Does Higher Education Influence Student Values?" Spotlight on the College Student, American Council on Education, 1959.

16. Kierkegaard, S. A., as quoted in Margaret C. Disert, "On Values," Journal of the National Association of Women Deans and Counselors, June, 1958, 21:175-177.

17. Kluckhohn, Clyde, "Values and Value-Orientations in the Theory of Action: An Exploration in Definition and Classification," Toward a General Theory of Action, Talcott Parsons and Edward A. Shils, editors (New York: Harper & Row, Torchbook Edition, 1962).

18. Lehmann, Irvin J., "Some Socio-Cultural Differences in Attitudes and Values," Journal of Educational Sociology, September, 1962, 36:1-9.

19. Lehmann, Irvin J., and Payne, Isabelle K., "An Exploration of Attitude and Value Changes of College Freshmen," Personnel and Guidance Journal, January, 1963, 41:403-408.

20. Linton, Ralph, The Cultural Background of Personality (New York: Appleton-Century-Crofts Co., 1945).

21. Pressey, S. L., and Jones, A. W., "1923-1953 and 20-60 Age Changes in Moral Codes, Anxieties, and Interests, as Shown by the 'X-O Tests'," *Journal of Psychology*, April, 1955, 39:485-502.

22. Prince, Richard H., "A Study of the Relationship Between Individual Values and Administrative Effectiveness in the School Situation," unpublished doctoral dissertation, University of Chicago, December, 1957.

23. Remmers, H. H., and Radler, D. H., "Teenage Attitudes," *The Adolescent--A Book of Readings*, Jerome M. Seidman, editor (New York: Holt, Rinehart and Winston, 1960).

24. Spindler, George D., "Education in a Transforming American Culture," *Harvard Educational Review*, Spring, 1955, 25:145-156.

25. Thompson, Orville E., "High School Students and Their Values," *California Journal of Educational Research*, November, 1965, 16:217-227.

26. Thompson, Orville E., "Student Values--Traditional or Emergent," *California Journal of Educational Research*, May, 1961, 12:132-143.

CHAPTER III

DESIGN AND PROCEDURE

This study covered all of the freshmen entering ten high schools in central California in the fall of 1962. The schools were selected from a listing of schools, stratified by size and kind of community, within a radius of 100 miles of Davis, California. The intent was to select schools in communities representative of the various socio-economic areas within the state and representative of small, medium, and large high school districts. For comparison, a parochial school was added to the nine schools in the original sample. (These schools are described in the Appendix.) Every school initially selected for the study participated and gave the utmost support throughout the four years. The testing of students and teachers was coordinated through the director of testing within each school. All tests were administered by regular school personnel. Testing was completed in November and early December with one minor exception: in the final year one school had to delay testing for two months because of a critical space shortage created by having two high schools sharing the same campus. A single research assistant directed the field activity and data processing throughout the study. All testing materials were personally delivered to the schools and collected when completed. Standardized instructions were used for each year of testing. All student interviews were under the supervision of the research assistant, who was aided by several interviewers trained by the research assistant and the project director. Mark-sense answer sheets, used one year, were abandoned because of machine scoring difficulties. Test materials for teachers, with instructions, were placed in packets for each teacher each year.

THE SAMPLE

Of the 2,287 (1,133 boys, 1,154 girls) freshmen in the ten high schools in 1962, 1,791 (896 boys, 894 girls) were available for testing again as sophomores. By the senior year, the sample had decreased to 1,365 (701 boys, 664 girls). No attempt was made to retest those no longer in the ten high schools. One hundred and two students (48 boys, 54 girls) were identified by the schools as bona fide dropouts. The others not retested were unidentified dropouts, transfers, or unavailable for testing for some other reason. Very few students refused to participate in the study.

The teachers of the students in the sample were invited to participate in the testing program each year. As anticipated, several refused to cooperate--for personal reasons. Complete data were obtained on 371 teachers.

During each spring semester of the study, a random sample of ten students in each high school were interviewed. A standard interview form was used each year.

THE INSTRUMENTS

Differential Values Inventory. The basic instrument used to measure personal values was the Differential Values Inventory, developed by Prince.[6] This forced-choice questionnaire contains 64 pairs of items, each preceded by the words "I ought to . . ." The respondent identified which value statement in the pair was the more important to him personally. Each pair of items contains a traditional- and an emergent-value statement. Sixteen value statements are included in each of the four traditional-value scales--Puritan morality, individualism, work success, and future-time orientation--and in each of the four emergent values--sociability, conformity, moral relativism, and present-time orientation. These subscales are totaled to obtain an emergent and a traditional value score for each person. (Theoretically, the mean for each subscale should be 8.00, with 32.00 being the mean traditional and the mean emergent value scores.) This form of value measurement contains specific evaluative statements about particular situations and is designed to measure how an individual thinks he "ought to" respond, general indicators of normative values, i.e., what should be. Thus, the basic intent of this instrument is to assess the individual's true internal feeling of "ought to"--regardless of what he actually does. This sense of obligation, preferential feeling, is then translated as being what the individual truly cherishes, and, as such, is an indicator of his true values.

The primary reason why students were interviewed three months after being tested was to determine the reliability of the student's responses to items on the Differential Values Inventory. The interview form therefore included 22 of the original 64 pairs of items. The interviewed students showed a very high consistency between the answer given in the written test and that given in the interview three months later. No significant difference was found between the responses of individual students to items on the written test and oral responses to the same items. A test-retest a year later of a random sample of 100 students gave a correlation $\underline{r} = 0.78$. The split-half Kuder-Richardson formula produced a reliability correlation coefficient of 0.951 on a sample of 827 high school males. This evidence, plus the finding of no significant differences between the 1,789 students tested as freshmen and as sophomores on seven of the eight subscales, lends further confidence to the consistency and stability of responses on the Differential Values Inventory. The internal consistency of the test was originally determined by graphic item analysis by Shanner,[6] which takes into consideration both item difficulty and discrimination among groups of known characteristics on an external-criterion basis.

In constructing the Differential Values Inventory, Prince relied for the original battery of items upon work by Allport and Vernon, Woodruff, Battle, Dunkel, Reisman, and Edwards.[6] A panel of University of Chicago faculty, school administrators, and teachers reviewed the original items for content validity. Individual items were analyzed by pilot studies with groups of students having known value characteristics. Numerous revisions preceded the current form of the test. Further evidence of content validity resulted from a factor analysis of responses of 1,790 California high school students. The initial correlation matrix showed relatively low positive correlations among the emergent and the traditional subscales. The traditional subscales correlated negatively with the emergent scales, as was expected, and these correlations were relatively high, -0.346 to -0.636. Correlations between opposite subscales (e.g., future-time vs. present-time orientation) ranged from -0.492 to -0.636, all highly significant. Seven unique factors (scales) were identified. The eighth was less pronounced than the others. It can be assumed, then, that the instrument measures reliably eight different attributes of personality as identified by Prince.

Consistency in results of this instrument attests to criterion-related validity. Test results from samples of 400 high school students, 827 high school students, and this study of 2,287 high school freshmen showed that students who attended church frequently, those who were high achievers, and those in the college preparatory curriculum had significantly higher traditional-value scores than did non-church attenders, low achievers, and general-curriculum majors. Students in parochial schools had consistently higher traditional values than did public-school students. In this study of 2,287 freshmen, parochial students ($\underline{n} = 186$) had significantly higher mean scores on each of the four traditional subscales than did students in any of the nine public schools, and they had significantly lower mean scores on two of the four emergent subscales.

Study of Values. Allport-Vernon-Lindzey's Study of Values test[1] is a scale for measuring the dominant interest in personality. The test, designed to measure the relative importance of six basic interests or motives in personality (theoretical, economic, aesthetic, social, political, religious) contains 120 questions relating to familiar situations. The respondent selects one of several alternative answers. Twenty questions relate to each of the six values. This instrument, with modifications, has been in continual use for over 35 years and has been subjected to numerous tests for reliability and validity. Split-half reliability coefficients ranging from 0.73 to 0.90 are reported. Item analysis has demonstrated a positive correlation for each item with the total score for its value, significant at the 0.01 level of confidence. Numerous studies have attested to external validation as well as indirect validation of the instrument.

This instrument was selected for use with teachers because of its demonstrated effectiveness as a measure of adult values, particularly adults with college educations. The Study of Values was included to test whether the ability of the teacher to communicate with his students is related to his values as measured by this instrument.

Interview Schedule. A random sample of ten students was interviewed in each school in each year. The interview was aimed at testing the reliability of the Differential Values Inventory, as well as learning more about the student and his interest.

The interview schedule includes a sample of 22 of the pairs of items in the Differential Values Inventory, 28 selected questions from the Study of Values, and 25 items from the Inventory of Beliefs.[4] In addition, 58 questions were related to study habits, hobbies, and personal interests. The hour-long interviews were conducted during February and March in each year.

Occupational Values Inventory. The investigators were concerned with measurement of a dimension of values other than that of personality. The high school student is in the process of exploring himself to determine what features of a vocation will help him gain personal satisfaction, and he is exploring the world of work to find how these features appear in reality; thus, some measure was desired of what youth values in an occupation. An occupational value scale was adapted from Centers'[2] study of social classes. This scale contains ten job characteristics hereinafter called occupational values. The student rated each of these as important or not important to him in deciding the job or occupation he planned for his life's work.

The consistency of responses was found to be very high. For example, the percent who rated esteem important as an occupational value was 59.6 when freshmen, 59.9 as sophomores, and 60.0 when seniors. In only one of the ten items did the mean group response percentage vary more than 7 percent. Only two values had over a 5 percent change. As anticipated, individual students changed their responses between the testings, but the total number was less than might have been expected. Over 91 percent of those who thought a job must be interesting gave the same response on all test administrations. Content validity is inferred repeatedly from the results obtained. For example, students indicating a desire to be self-employed placed much more importance upon being boss than did those planning to work for someone else.

Background Information. The student background inventory has few original items: most are adapted from other studies. Responses to the question on academic achievement were verified by comparing actual grades with the student's indicated achievement level. This verification was done in both the freshman and senior years. No significant differences between indicated and achieved grades could be demonstrated at the 1 percent level. Students were very realistic in reporting grades they were receiving. Any tendency to deviate from the indicated grades was usually on the low side. In other words, students were more likely to underrate their achievement than to overrate it.

STATISTICAL PROCEDURES

The nature of the Differential Values Inventory made the standard analysis of variance inappropriate for that part of the study. Since this inventory yields ipsative data (by the forced-choice items), it was necessary to use a procedure for analysis of profile data by Greenhouse and Geisser,[3] which yields a conservative F test. Comparison among groups on each scale was made by Duncan's multiple-range test with Kramer's[5] procedure used for extending this test to groups of unequal size. The above procedures were adapted for use in this study by Mary C. Regan, University of California, Davis.

Whenever significant differences are mentioned in the text, these are at the 5 percent level unless otherwise designated.

References

1. Allport, Gordon W., Vernon, Philip E., and Lindzey, Gardner, Study of Values, test booklet (Boston, Mass: Houghton Mifflin Company, 1960.)

2. Centers, Richard, The Psychology of Social Classes (Princeton, New Jersey: Princeton University Press, 1949).

3. Greenhouse, Samuel W., and Geisser, Seymour, "On Methods in the Analysis of Profile Data," Psychometrika, June, 1959, 24:95-112.

4. "Inventory of Beliefs," Cooperative Study of Evaluation in General Education, American Council on Education, Washington, D.C., 1950.

5. Kramer, C. Y., "Extension of Multiple Range Tests to Group Means with Unequal Numbers of Replication," Biometrics, September, 1956, 12:307-310.

6. Prince, Richard H., "A Study of the Relationship Between Individual Values and Administrative Effectiveness in the School Situation," unpublished doctoral dissertation, University of Chicago, December, 1957.

CHAPTER IV

FINDINGS OF THE STUDY

THE STUDENTS IN THE STUDY

The Test Group. A relatively high attrition was expected between the freshman and senior years in the sample schools. Of the 2,287 freshmen in the original group, 1,365 (59.7 percent) were tested 3 years later (Table 1). The proportion of males increased from 49.5 percent in the original group to 51.2 in the senior retest group. The 60 percent continuation is a rather high rate considering the extreme mobility of California families. School number 7, which is in a rapidly expanding district, had the lowest retest percentage--50.3. Part of the loss can be attributed to recent redistricting and the transfer of defense-industry employees because of contract cutbacks. Retention rate was the highest in school number 1, where 73.7 percent of the freshmen were tested as seniors. This school is in an urban community dominated by two large, stable industries. Although the schools differ widely in retention rates, the proportion of males to females remained quite constant. Of the 922 who did not complete the study, 48 males and 54 females were verified by school officials to be dropouts. The other 820 not in the study as seniors had transferred, were unidentified dropouts, or for some unknown reason were not present for testing.

Table 1

Students in the Study as Freshmen and Seniors

School	1963 Freshmen			1966 Seniors			% Completion
	M	F	Total	M	F	Total	
	%	%	n	%	%	n	%
0	47.6	52.4	105	50.0	50.0	64	60.9
1	45.7	54.3	175	43.4	56.6	129	73.7
2	54.3	45.7	151	59.2	40.8	103	68.2
3	51.4	48.6	247	57.7	42.3	130	52.6
4	52.7	47.3	112	53.7	46.3	82	73.2
5	49.2	50.8	325	49.2	50.8	199	61.2
6	51.6	48.4	225	52.8	47.2	159	70.6
7	47.1	52.9	507	47.8	52.2	255	50.3
8	50.6	49.4	320	52.2	47.8	180	56.3
9	48.2	51.7	120	51.6	48.4	64	53.3
Total	49.5	50.5	2,287	51.2	48.8	1,365	59.7

Socio-economic. The father's occupation was used as an index of the socio-economic level of the family, since occupation is generally accepted as the best single criterion of an individual's status in the social hierarchy. Not only does occupation indicate position of prestige, but it also implies patterns of consumption, area of residence, tastes, interests, politics, and probable educational attainment. The categories for occupational classification were adapted from Edwards,[1] and this code was found preferable to the U.S. Census categories since it permits a differentiation between persons who are self-employed and those who are salaried or wage earners. The code also gives recognition to the rapidly expanding white-collar occupations, which the U.S. Census places in the general clerical and sales category. The upper and lower white-collar classifications proved particularly useful in coding persons in service occupations: military personnel, laboratory technicians, and other semi-professional occupations.

Table 2 shows the considerable variation among schools in the socio-economic level of families of seniors as indicated by the father's occupation. The manual occupations averaged 27.1 percent, from 6.7 percent, in school 8, to 55.0 percent, in school 1. White-collar occupations accounted for 38.7 percent of employed fathers, from 21.0 percent, in school 1, to 52.4 percent, in school 3. The proportion who were self-employed varied from 7.8 percent, in school 7, to 32.9 percent, in school 4. School 7 represents an area with high employment in defense industries and few businesses, while school 4 has a concentration of operators of large farms, who constituted the bulk of the self-employed. The professionals, who composed slightly over 10 percent of the entire sample, tended to be concentrated in schools 3, 6, 7, 8, and 9. Broadly categorized, about one-fourth of the fathers were employed in manually-skilled occupations, one-third were white-collar employees, one-sixth were self-employed, and one-tenth were professionals.

Changes were observed in the occupational status of fathers whose children were in the study 3 years. The substantial decrease in the proportion of unskilled laborers, with a corresponding increase in the skilled and lower white-collar workers, indicates an upward movement for the many unskilled laborers into skilled and white-collar positions. Actually, 146 fathers listed as unskilled laborers in 1963 were skilled laborers or lower white-collar workers in 1966. This could also reflect the impact of programs to upgrade employees having low-level skills.

Table 2
Father's Occupation of Seniors by Schools

Category father's occupation	Schools										Total
	0	1	2	3	4	5	6	7	8	9	
	%	%	%	%	%	%	%	%	%	%	%
Manual, unskilled	14.1	42.6	26.2	0.8	10.9	12.1	10.7	7.1	2.8	10.9	12.6
Manual, skilled	7.8	12.4	16.5	8.5	14.6	25.1	8.8	21.6	3.9	17.2	14.5
Lower white-collar	21.9	20.2	19.4	18.5	21.9	31.2	23.3	27.5	20.0	23.4	23.6
Upper white-collar	9.4	0.8	3.9	33.9	8.5	7.5	17.6	16.5	29.4	9.4	15.1
Artisan*	1.6	3.9	2.9	3.1	2.4	1.5	2.5	1.9	2.2	3.1	2.4
Merchant*	21.9	6.2	3.9	15.4	13.4	8.5	11.9	5.9	12.8	6.3	9.4
Farmer*	9.4	---	16.5	1.5	17.1	3.0	8.8	---	---	4.7	4.5
Professional**	---	2.3	0.9	3.1	1.2	4.0	5.0	10.6	8.3	7.8	5.3
Professional*	4.7	1.6	1.9	7.7	2.4	---	5.7	0.8	6.7	6.3	3.4
Executive	---	---	---	2.3	---	---	2.5	1.6	8.9	1.6	2.1
Blank	9.4	10.1	7.8	5.4	7.3	7.0	3.1	6.7	5.0	9.4	6.7

*self-employed
**salaried

Residence, Family, Religion. Even though several schools were in rural and semi-rural surroundings, only one in six students came from farm backgrounds, and these were concentrated in five schools. One school, number 2, had almost one-half its students from farms, whereas only one student from school 1 and two from school 4 lived on farms.

The home situation of students varied little among the schools. About one senior in six, and one freshman in ten, came from an atypical home (minus mother, father, or both)(Table 1A).* Students living with one parent were usually with the mother. The number living with both parents decreased by 92 (8 percent) in the sample of 1,365 freshmen retested as seniors. Of the increase of 26 seniors living with the father, 24 had lived with both parents when a freshman. The increase of 38 seniors living with mothers had all lived in typical homes as freshmen. This suggests that most of the change was the result of separation and divorce.

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*All "A" tables appear in the Appendix.

Interest in religious activities, measured by frequency of church attendance, varied markedly among schools. Students in the parochial school had mandatory attendance, while those in the other schools who attended church weekly ranged from 18 to 55 percent (Table 3).

Table 3

Frequency of Church Attendance of Seniors by Schools

Schools	Frequency of church attendance									
	Weekly		Semi-monthly		Monthly		Seldom		Never	
	M n=255	F n=329	M n=68	F n=49	M n=39	F n=42	M n=168	F n=169	M n=166	F n=75
	%	%	%	%	%	%	%	%	%	%
0	18.8	53.1	18.8	12.5	6.3	6.3	31.3	18.8	25.0	9.4
1	50.0	54.8	7.1	1.4	1.8	6.9	21.4	26.0	19.6	10.9
2	34.4	47.6	8.2	4.8	3.3	9.5	26.2	26.2	27.9	11.9
3	26.7	50.9	12.0	10.9	6.7	7.3	26.7	16.4	28.0	14.6
4	18.2	34.2	15.9	7.9	9.1	10.5	22.7	31.6	34.1	15.8
5	30.6	43.6	9.2	8.9	7.1	---	29.6	31.7	22.5	15.8
6	83.3	96.0	7.1	1.3	3.6	1.3	4.8	1.3	---	---
7	35.3	35.3	9.8	6.8	5.7	10.5	26.2	36.8	22.9	9.8
8	22.3	40.7	6.4	13.9	8.5	4.7	25.5	30.2	36.2	10.5
9	24.2	41.9	12.1	6.5	---	12.9	33.3	12.9	30.3	22.6
Total	36.5	49.4	9.7	7.4	5.6	6.3	24.0	25.4	23.8	11.3

About one-third of the group as freshmen seldom or never attended church, and girls were generally more concerned with religious activities than boys. Frequency of church attendance decreased between the freshman and senior year for both males and females, but to a greater extent among the males. Frequent attendance (at least twice a month) decreased from 71 percent for girls and 61 percent for boys when freshmen to 57 percent and 46 percent for the same students when seniors. (When the parochial school, which had 98 percent attending church weekly, is not included, these respective percentages changed to 66, 53, 52, and 40.) Among seniors, frequency of church attendance was related to scholastic achievement: attendance decreased dramatically as scholarship decreased. Weekly attendance at church was 60.8 percent for "A" students, 49.8 percent for "B" students, 36.2 percent for "C" students, and 22.7 percent for "D" students (Table 2A). Little difference was found among achievement groups in the percentages who attended church once or twice a month. As expected, the proportion who seldom or never attended church was 24.7 percent of the "A" students, increasing to 60.6 percent of the "D" students.

Academic Achievement. Average grades of all students compared very favorably when tested as freshmen and as seniors. Actually, 91 percent of the "A" students as seniors had been "A" or "B" students as freshmen (Table 4).

Table 4

Comparison of Academic Achievement of Students by Schools, Years, and Sex

		Grades							
Schools	Sex	A		B		C		D	
		1963 n=89	1966 n=97	1963 n=581	1966 n=550	1963 n=631	1966 n=650	1963 n=55	1966 n=66
		%	%	%	%	%	%	%	%
0	M	6.3	---	21.9	21.9	68.8	71.9	3.1	6.3
	F	9.4	6.3	56.3	50.0	34.4	40.6	---	3.1
1	M	12.5	7.1	41.1	32.1	42.9	57.1	3.6	3.6
	F	13.7	10.9	54.8	47.9	31.5	41.0	---	---
2	M	3.3	8.2	26.2	37.7	63.9	49.2	6.6	4.9
	F	11.9	7.1	42.9	45.2	30.9	35.7	14.3	9.5
3	M	6.7	9.3	41.3	36.7	48.0	44.0	4.0	8.0
	F	7.3	7.3	54.6	56.4	38.2	32.7	---	3.6
4	M	9.1	6.8	31.8	25.0	40.9	61.4	15.9	4.6
	F	10.5	5.3	42.1	34.2	39.5	52.6	5.3	7.9
5	M	1.0	8.2	23.0	23.5	68.0	64.3	8.0	4.1
	F	3.0	6.9	42.4	42.6	50.5	47.5	3.0	2.9
6	M	3.6	4.8	50.0	47.6	39.3	44.1	7.1	3.6
	F	10.7	12.0	52.0	56.0	33.3	30.7	2.7	1.3
7	M	2.5	9.0	40.2	22.9	54.9	58.2	1.6	9.8
	F	7.5	6.8	51.1	49.6	38.4	40.6	1.5	3.0
8	M	4.3	1.1	39.4	34.0	52.1	57.5	3.2	7.5
	F	10.5	6.9	53.5	62.8	34.9	25.6	1.2	4.7
9	M	3.0	6.1	33.3	27.3	57.6	63.6	3.0	3.0
	F	3.2	6.5	35.5	35.5	54.8	51.6	6.5	6.5
Total	M	4.6	6.4	36.1	31.5	53.5	55.9	5.3	6.0
	F	8.6	7.8	49.4	49.6	38.6	38.9	2.7	3.6

In general, about 6-7 percent were "A" students, 40 percent were "B" students, and slightly less than 50 percent were "C" students. Although achievement varied among schools, the variation was actually less than one might expect, implying that the proportioning of grades in each school was rather consistent. One could expect general average grades to be higher for seniors, because of a loss of the less capable students through dropout, but that was not the case.

The accepted generalization that high school girls receive higher grades than boys is reconfirmed in this study. In the senior group of 1,365, approximately 18 percent more girls than boys were "B" students, and 17 percent more boys than girls were "C" students. Among students with grades lower than "C," boys outnumbered girls two to one. An obvious relationship exists between grades and the occupation of the father. One-fourth (27.1 percent) of the seniors' fathers were in manually-skilled occupations, and their offspring composed 20.6 percent of the "A" students, 22.9 percent of the "B" students, and 31.4 percent of the "C" students (Table 5A). By comparison, although only 10.7 percent of the fathers were in the professions, their children made up 18.6 percent of the "A" students, 14 percent of the "B" students, and 7.2 percent of the "C" students. The pattern is similar for children of self-employed fathers. This relationship is further emphasized by the fact that "A" students composed 7.1 percent of the senior group, yet only 5.4 percent of those seniors whose fathers were manually-skilled laborers were "A" students, compared to 12.3 percent of those whose fathers were professionals (Table 4A).

Curriculum. Curriculum emphasis varied among schools, reflecting the educational philosophy of the administration, the school board, and the community. Slightly over half (58 percent) of the freshmen identified themselves as being in a college preparatory program, and about one-fourth (22 percent) in the general program. One-tenth (10 percent) didn't identify with a particular curriculum. Only a few identified themselves as vocational (4 percent) or business (5 percent) majors (Table 5). The distribution among schools of freshmen in a college preparatory program varied from 89 percent, in the parochial school, to 45 percent, in school 5. Changes between the freshman and senior years in an individual's major curriculum varied among the schools. The proportion of students in college preparatory courses increased in only one school, and then by less than 5 percent. The overall decline in the college preparatory course was greatest in school 4, a farming community, where the percentage of college-bound students dropped from 56.1 to 35.4 percent. A fourfold increase (from 5 to 19 percent) in the number electing the business major, principally among the females, was accompanied by a small decrease in females in college preparatory courses, general programs, and the undecided group.

Table 5

High School Curriculum of Freshmen and Seniors by Schools

Schools	Curriculum									
	College prep.		Business		Vocational		General		Don't know	
	1963 n=788	1966 n=706	1963 n=72	1966 n=262	1963 n=50	1966 n=62	1963 n=304	1966 n=273	1963 n=151	1966 n=62
	%	%	%	%	%	%	%	%	%	%
0	59.4	64.1	3.1	6.3	---	6.3	12.5	17.2	25.0	6.3
1	55.0	53.5	---	14.7	3.9	4.7	37.2	24.8	3.9	2.3
2	48.5	39.8	4.9	17.5	5.8	3.9	28.2	27.2	12.6	11.7
3	51.5	51.5	3.9	16.2	3.1	6.2	31.5	23.1	7.7	3.1
4	56.1	35.4	7.3	18.3	9.8	11.0	13.4	18.3	13.4	17.1
5	45.2	37.7	6.0	29.7	4.0	2.0	33.7	25.1	10.6	5.5
6	89.3	79.9	2.5	7.6	0.6	---	4.4	12.0	2.5	0.6
7	48.6	45.1	7.5	29.8	3.9	5.9	21.2	16.5	16.5	2.8
8	72.2	63.9	4.4	10.6	3.3	5.0	12.8	18.3	7.2	2.2
9	46.9	42.2	17.2	26.7	3.1	4.7	25.0	20.3	6.3	3.1
Total	57.7	51.7	5.3	19.2	3.7	4.5	22.3	20.0	10.2	4.5

Comparisons of the high school majors of students as freshmen and the same group as seniors confirm the observation in the individual schools. A general decrease (6 percent) occurred in the college preparatory group; business majors showed a sizable increase; the vocational group (mostly males) was small but persistent; and the proportion of those in the general major and those who weren't in any particular curriculum decreased. Of the 705 seniors in the college preparatory program, 85 percent had been in that major as freshmen. The remainder had changed from the general and undecided groups. The increase of 192 in the business major as seniors included 86 transfers from college preparatory and 86 from the general major. Only 44 had been business majors as freshmen. Obviously, as graduation neared, a number decided to prepare for clerical work, possibly influenced by the increased emphasis of federal granting agencies on education in business occupations. The group of 788 in the college preparatory curriculum as freshmen were distributed as follows when seniors: 598 were still college preparatory; 86 were in the business curriculum; 74 were in the general major; 19 were in the vocational field; and 11 were not in any particular major.

A strong relationship exists between curriculum selection and achievement. Of the seniors who were "A" students, 82.5 percent were in a college preparatory program, 74.2 percent were "B" students, 31.4 percent were "C" students, and less than 20 percent were "D" students (Table 6A). Of the 262 students selecting a business major, one-third (33.6 percent) were "B" students and 57.6 percent were "C" students (twice the percent of college preparatory students who were in the "C" group). One-third of the "C" students and one-third of the "D" students were in the general major. Of all those in the general major, 79.5 percent were "C" students, and the rest were equally "B" and "D" students. Those 62 students who were unsure of their major were predominantly "C" students or lower.

Occupational Choice. Although many persons would disagree, this study suggests that a freshman is able to identify a vocational objective early and that he has a tendency to repeat his vocational interest year after year. Students who changed their occupational choice tended to elect an occupation at least one step higher on the socio-economic scale. Occupational choice as stratified by school shows a relationship between student choice and the occupation of the father. For example, in school 2, where 56 percent of the fathers were employed in manual occupations, 20.5 percent of the students chose manual occupations, the highest for any school. By contrast, in school 3, where 18.2 percent of the fathers were in manual occupations, only 1.9 percent of the students chose this type of work. The same general relationship between father's occupation and student choice tended to exist in white-collar occupations, business occupations and the professions.

There was an expected difference between the kinds of vocations selected by senior males and by senior females. More females than males chose lower and upper white-collar occupations. Although the highest single choice for males was white-collar occupations (32.4 percent, compared with 76.2 percent for females), males dominated the professional categories (23.6 percent, to 5.8 percent females), and the manual occupations (8.7 percent to 0.7 percent) (Table 6).

Table 6

Occupational Choice of Students by Year and by Sex

Category of occupational choice of student	Male		Female		Total	
	1963 n=701	1966 n=701	1963 n=664	1966 n=664	1963 n=1365	1966 n=1365
	%	%	%	%	%	%
Manual, unskilled	7.3	1.7	0.6	0.2	4.0	0.9
Manual, skilled	4.7	7.0	0.2	0.5	2.5	3.8
Lower white-collar	13.3	8.6	32.9	37.5	22.9	22.7
Upper white-collar	15.6	23.8	40.2	38.7	27.6	31.1
Artisan*	0.3	0.7	---	0.3	0.2	0.5
Merchant*	3.3	2.2	0.3	---	1.8	1.1
Farmer*	4.3	3.4	0.3	0.2	2.3	1.8
Professional**	16.8	12.7	2.4	3.2	9.8	8.1
Professional*	16.3	10.3	6.8	2.6	11.7	6.5
Executive	0.6	0.6	---	---	0.3	0.3
Blank	17.7	29.0	16.3	16.9	17.0	23.2

*self-employed
**salaried

Group changes in occupational preferences of males between freshman and senior years showed a decrease of 75 in the manual occupations. Forty of this number named a skilled occupation when a senior, and 31 chose a low white-collar occupation. Thus, the proportion in the skilled and low white-collar occupations increased by the senior year. The number of males choosing the professions decreased, however, indicating that by the senior year many students begin to realize that entry into the professions may have requirements they cannot meet. Still, the proportion selecting one of the professions exceeded the proportion of fathers in the professional groups by almost three to one. Those 124 males undecided as freshmen increased to 203 (29.0 percent) as seniors. Categories of occupations chosen by the females as freshmen and as seniors were practically identical; about three-fourths of them chose white-collar occupations (clerical, teachers, social workers, nurses); 8 percent were scattered among the other occupational categories; and one in six was undecided, a figure somewhat lower than for males. Stability of choice is illustrated by the fact that 78 percent of those choosing a white-collar occupation as a freshman made the same choice as a senior. Obviously, a large number of females see themselves as future members of the labor force as early as the freshman year in high school. A change of 192 of the seniors to the business curriculum during high school also illustrates the change in occupational orientation of these students.

Senior students were quite realistic in assessing their own abilities, as measured by their scholastic achievement and their occupational choice. Among the 65 (4.8 percent) who elected to work in a manually-skilled occupation, only 1.5 percent were "A" students and 81.6 percent had "C" grades or lower (Table 7A). Of the students choosing a profession, 15.3 percent were "A" students, 56.7 percent were "B" students, and only 28.1 percent were "C" students or lower. The students electing to be white-collar workers constituted a rather average group including 6.4 percent "A" students (compared with 7.1 percent for all seniors) and 48.1 percent "C" students (compared with 47.6 percent for all seniors). The group choosing occupations in which they would be self-employed was small (47), but also had an academic record primarily similar to those choosing manually-skilled occupations. Students undecided about their occupational choice had an achievement pattern somewhat like that of the white-collar group, but contained a higher proportion of the "D" students. Actually, 44 percent of the "D" students were undecided about an occupation, which in itself may illustrate that these students realize that they are severely limited in the number of occupations they may enter.

Post-High-School Plans. Post-high-school plans of students varied among schools, and particularly among freshmen. College, which was planned for by 71 percent, was slightly higher for females than for males. The percentage planning for college ranged from 43, in school 9, to 78, in school 6. Interest in college corresponded to the proximity to the high school of a junior college or a four-year college. Interest in college was also related to the general socio-economic level of the school community. The schools whose freshmen expressed the least interest in college were the same schools whose seniors had the lowest desire to attend college. The proportion of males who planned to go into the military service after high school decreased from 15.8 percent to 4.5 percent between the freshmen and senior years (Table 7). This decrease nearly equalled the increase in the number who chose college as seniors. Actually, 72 giving military as freshmen changed to college when seniors. The change in the world political situation may have influenced this change. As expected, students who were undecided about post-high-school plans decreased from about 16 percent to about 10 percent between the freshman and senior years. Surprisingly few freshmen or seniors--only about 5 percent of the entire group--planned to take any available job upon graduation.

Table 7

Post-High-School Plans of Seniors by Schools

Plans	Schools										Total
	0	1	2	3	4	5	6	7	8	9	
	%	%	%	%	%	%	%	%	%	%	%
Military	7.8	3.1	7.8	2.3	1.2	7.0	0.6	5.1	2.8	12.5	4.5
Farming	4.7	1.6	0.9	---	1.2	1.0	1.3	1.6	---	3.1	1.3
College	82.8	82.9	67.9	87.7	69.5	69.9	94.3	76.9	85.0	64.1	79.1
Any job	1.6	3.1	8.7	2.3	11.0	6.5	1.3	7.5	3.3	12.5	5.4
Undecided	3.1	9.3	14.6	7.7	17.1	15.6	2.5	9.0	8.3	7.8	9.6

High school achievement is related to the post-high-school plans of students (Table 8A). Few of the "A" students (8.2 percent) had plans other than college attendance. Non-college plans increase progressively as scholastic achievement decreases; 56.1 percent of the "D" students did not plan to attend college. Plans for military service immediately after high school were more predominant among "C" and "D" students than among students with higher achievement, and the student who had no post-high-school plans or would take any job available was in all probability a "C" or "D" student.

Employment of Mother. Working mothers, once the exception, are now prevalent, at least by the standards of this sample. Some variation in the proportion of mothers who work outside the home can be related to the general socio-economic level of the community. In communities with the higher percentage of fathers who were self-employed or professionals, a smaller percentage of the mothers worked. Over the 3-year period of the testing, the proportion of those who worked increased from about 40 to 48 percent, and the percentage of those who worked full time also increased from 21 to 25 percent. Actually, in the senior group of 1,356 students, the number of mothers with full-time or part-time employment was 90 more than in the freshman year. Many reasons could be advanced to explain this increase, not the least significant of which is the general trend of more women in the labor force and the general status of our economy.

THE TEACHERS IN THE STUDY

During their freshman and senior years the students were taught by 371 different teachers (226 men, 145 women), each of whom completed the Differential Values Inventory and the Study of Values. These teachers, for the most part, were young (44 percent were under 30 years old), with consequently limited teaching experience (55 percent had less than 5 years' experience). Only 11 percent were over 50 years old, and of these only 5 were older than 60. Male teachers tended to be older than female teachers. The youngest and least experienced teachers were in physical education: 68 percent of the 41 physical education teachers were under 30 years old, and only one was over 50. By contrast, only 34 percent of the 76 science-mathematics teachers were under 30 years of age.

While male teachers tended to be older, women tended to dominate the group, averaging over 15 years of teaching experience. Nineteen percent (29) of the females had taught more than 15 years, and only 9 percent (20) of the males had as much teaching experience.

Women were more frequent church attenders than were men, the same as was found for students. As a group, however, teachers attended church less frequently than did students. Also, the proportion who never attended church was higher for the teachers.

OCCUPATIONAL VALUES

The Test Group. How the student viewed his future vocation was measured by his rating of certain characteristics of the occupations. Each student indicated whether the characteristic statement was important or not important to him in making his decision to pursue a certain vocation. Resultant patterns provided another dimension of what the student cherishes, and hence his values (See Appendix for scale). The following discussion is limited to those 1,365 students who completed the study as freshmen and as seniors. Upon reviewing the responses, the relative importance that groups placed upon a value differed little between males and females, or between freshmen and seniors. All stratification of the data showed agreement on the order of preference for the two occupational values considered most important, and the two least important. Differences among the rank order of the remaining five values varied no more than one place. The students ranked highest in importance a job which was interesting (95.2 percent), followed by 91.9 percent stating as important a job which offered opportunity for self-expression (Table 8). A job which provided security was chosen as important by 82.3 percent and 81 percent felt it important to have a job which provides the opportunity to help others. The next four occupational values--opportunity to gain esteem, opportunity to gain wide recognition, a chance to work independently, a high-paying job--were important to 45 to 60 percent of the students and ranked in fifth, sixth, seventh, and eighth place. Two values--opportunity to be a leader and that of being boss--held uncontested ninth and tenth place, with only 35 and 20 percent of the students ranking them as important. In general, these high school students as a group wanted their jobs to provide them an interesting experience, to allow for self-expression, to provide them with security, and to give them a chance to help others. They rejected the idea of being boss or being a leader.

Table 8

Percentage of Seniors in Each School Rating Occupational Value Important

Occupational values	Schools										Total
	0	1	2	3	4	5	6	7	8	9	
	%	%	%	%	%	%	%	%	%	%	%
Leader	31.3	31.0	37.9	40.8	23.2	28.1	37.7	40.0	42.2	28.1	35.4
Interesting	93.8	96.9	88.4	98.5	95.1	94.9	95.6	94.5	96.7	95.3	95.2
Esteem	57.8	61.2	58.3	67.7	51.2	58.3	55.9	65.9	55.0	64.0	60.0
Boss	23.4	11.6	17.5	25.4	13.4	17.1	22.0	20.9	22.2	26.6	19.9
Security	75.0	88.4	90.3	76.9	91.5	86.4	85.5	83.9	65.0	84.4	82.3
Expression	92.2	94.6	92.2	92.3	89.0	89.9	93.1	92.9	91.1	90.6	91.9
High pay	50.0	41.9	44.7	55.4	42.7	46.2	44.7	48.2	37.8	50.0	45.8
Fame & worth	56.3	63.6	59.2	64.6	56.1	49.3	55.4	60.0	58.3	60.9	58.0
Help others	81.3	88.4	77.7	74.6	75.6	83.9	84.9	80.8	76.1	87.5	81.0
Independence	62.5	41.9	56.3	54.6	52.4	50.8	40.9	54.5	46.1	59.4	50.7

Consistency of responses to each of the occupational values by individuals as freshmen and as seniors was high. When considering the entire group, repetition of responses was above 90 to 96 percent for the values of an interesting job, security, opportunity to help others, and opportunity for self-expression. A 75 to 90 percent repetition occurred on being a leader and being boss. On the remaining four values (esteem, high pay, fame, and independence) the consistency of responses was 61 to 69 percent.

Males and Females. Although group ranking of a value's importance varied only slightly, differences were significant between responses of males and females (Table 9). Significantly (1 percent level) more men than women rated as important the opportunity to be a leader, to be boss, to receive high pay, or to gain fame. Also, significantly more men than women were seeking security through their occupation. Females placed significantly more importance on having jobs which offer the chance to express one's abilities and to help other people. Males and females placed equal importance on an interesting job, an occupation looked upon favorably by peers, and a job which offered independent work.

Table 9

Comparison of Occupational Values of Male and Female Seniors
(Percent rating value important)

Occupational value	Male		Female		Chi square
	n=701		n=664		
Leader	323	46.2	160	24.0	73.12**
Interesting	661	94.6	638	95.8	0.58
Esteem	433	61.9	386	57.9	2.23
Boss	220	31.5	51	7.6	124.10**
Security	590	84.4	533	80.0	4.85*
Expression	627	89.7	628	94.3	8.97**
High pay	386	55.2	239	35.9	52.28**
Fame & worth	442	63.2	350	52.6	16.06**
Help others	492	70.8	611	91.7	94.05**
Independence	372	53.2	320	48.0	3.59

*significant 5 percent level
**significant 1 percent level

Freshmen vs. Seniors. Between the freshman and senior years the importance of some occupational values changed significantly--three values for the males and four values for the females (Table 10). For both males and females, the importance of security in one's occupation, high pay, and helping others through their occupations decreased significantly. In addition, female interest in working more or less on their own showed a significant decline. Group averages in the other six values remained relatively constant in importance, strengthening the hypothesis that even the criteria a person uses in selecting his vocation may be reasonably fixed before high school.

Table 10

Comparison of Occupational Values by Years and Sex
(Percent rating value important)

Occupational values	Male		Female		Chi square	
	1963 n=701	1966 n=701	1963 n=664	1966 n=664	Male	Female
	%	%	%	%		
Leader	41.2	46.2	20.8	24.0	3.556	1.730
Interesting	94.3	94.6	96.4	95.8	0.053	1.038
Esteem	62.5	61.9	56.6	57.9	0.048	0.048
Boss	26.7	31.5	8.3	7.7	3.775	0.255
Security	90.2	84.4	85.2	80.0	10.347**	8.113**
Expression	87.3	89.7	92.3	94.3	2.285	1.016
High pay	61.8	55.2	43.5	35.9	6.831**	9.198**
Fame & worth	59.9	63.2	49.3	52.6	1.466	1.091
Help others	81.7	70.8	95.0	91.7	24.076**	8.589**
Independence	56.4	53.2	53.0	48.1	1.393	4.372*

*significant 5 percent level
**significant 1 percent level

Academic Achievement and Occupational Values. Academic achievement was related to the importance placed upon certain occupational values. Being a leader was more important to the high-achieving student, especially the high-achieving male (Table 9A): less than half (46.2 percent) of all the males rated being a leader as important, whereas over 73 percent of the "A" students did. Only 40.9 percent of the "C" students indicated that this achievement was important. The "B" students, (male and female), were more interested in leadership than were the "C" students. Being boss was of more concern to high-achieving males than to high-achieving females. Quite the opposite was found for security, for both high-achieving males and females were significantly (1 percent level) less concerned with security than were the average and below-average students. High pay, a major concern to the high-achieving male, was of little concern to the high-achieving female. Low-achieving females placed significantly higher importance on high pay than did high-achieving females. Demonstrating worth through one's work was also of higher concern to high-achieving males. Regardless of achievement, females were generally interested in helping others, while male interest in altruism waned as achievement level decreased.

Achievement level and ability is related to what the student thinks is important in a vocation. The high achievers, especially males, tend to be much more sensitive or to have thought more about what they desire from their vocations. Of more concern to the high achiever were values, such as interest in being a leader or a boss and peer recognition, which bring personal attention to the worker. Placing importance on such personal job satisfactions may also be related to what makes a high achiever--he is motivated to demonstrate his abilities to others.

Socio-Economic Level and Occupational Values. How a student viewed his future occupation was also related to the socio-economic level of his family (Table 10A). Interest in being a leader through one's occupation increased for both males and females as the level of the father's occupation increased. Those whose fathers were professionals were significantly more interested in being leaders than those whose fathers were unskilled laborers or white-collar workers. The same pattern, but to a lesser degree, is found for the importance of gaining recognition. Interest in security decreased as the family's socio-economic level increased. Those males whose fathers were self-employed placed significantly greater importance on being boss and less on helping others than did those from other socio-economic levels. Other occupational values weren't significantly related to the family's socio-economic level.

How the student felt about certain occupational values was also related to the socio-economic level of his chosen occupation (Table 11A). The importance of leadership through one's occupation increased significantly (1 percent level) between males choosing unskilled occupations (34.4 percent) and males aspiring to be self-employed businessmen (59.1 percent). Seeking esteem through his vocation also increased significantly with the level of employment chosen by males. Students choosing to be self-employed businessmen surpassed other students in interest in being a leader, being boss, and being able to work independently--values that one would associate with an entrepreneur.

Occupational Values and Church Attendance. Little relation was found between the importance students placed upon occupational values and the frequency with which they attended church. One dramatic comparison was found between occupational values and curriculum in which the student was enrolled. Security was far more important (1 percent level) to those choosing the general, business, and vocational majors than to those in the college preparatory program.

What students thought important when considering an occupation as measured by these ten characteristics tends to indicate that certain features are unusually important to all students: interest, opportunity for expression, and need for security. At the same time, students showed a marked lack of interest in opportunities to be a leader or a boss. Perhaps this indicated a desire to shun responsibility while still wanting the occupation to guarantee security, provide pleasure, and offer the opportunity for recognition.

The Teachers and Their Occupational Values. How the teachers rated what was important to them in a vocation was closely related to what the students saw as important (Table 11). Teachers placed more emphasis than did students upon leadership, independence, and opportunity to help others, and less emphasis upon security and high pay. Though perhaps surprising, the lack of interest in security and high pay is understandable, for all the teachers were employed, some had tenure, and all were on salary scàles and had their teaching credentials--all of which contribute to both economic and personal security.

Some differences--perhaps predictable--were noted in occupational values of teachers with differing subject specializations. Physical education teachers were much more interested in leadership, being boss, and having security than were teachers in other fields. The teachers of business courses had little interest in being known for their talents, whereas teachers of art and music felt that this recognition was very important.

Table 11

Comparison of Teachers and Students on Occupational-Value Scales (Percent rating value important)

Value	Senior students		Teachers	
	Male	Female	Male	Female
	%	%	%	%
Leader	46.2	24.0	61.3	47.7
Interesting	94.6	95.8	99.1	97.9
Esteem	61.9	57.9	64.4	55.0
Boss	31.5	7.6	22.5	16.8
Security	84.4	80.0	30.2	36.9
Expression	89.7	94.3	99.5	99.3
High pay	55.2	35.9	15.8	16.8
Fame	63.2	52.6	59.9	49.7
Help others	70.8	91.7	97.3	96.6
Independence	53.2	48.0	75.2	81.9

Teachers place very high importance upon having their vocation provide interesting experiences, the opportunity to express themselves, and the opportunity to help others, and they aren't particularly interested in having their occupation provide high pay, security, or the opportunity to be boss.

PERSONAL VALUES

Freshman-Senior Groups. The primary objective of the study was to determine whether personal values changed during high school. Value patterns of students when freshmen were compared with those of the same students when seniors. These data were stratified by sex and by school.

No significant difference in values between freshman and senior males was found in nine of the ten schools (Table 12).

Table 12

Mean Value Scores for Males by School and Year

School	Year	Value subscales[1]								F-value
		PM	IND	WS	FTO	SOC	CONF	MR	PTO	
0	1963	7.03	8.88	8.78	8.06	7.91	6.28	9.00	8.06	0.866
	1966	6.81	8.63	9.41	8.44	7.56	5.00	9.47	8.69	
1	1963	7.16	7.88	9.52	8.84	8.25	5.39	8.54	8.43	2.471
	1966	6.27	8.84	9.18	8.02	8.43	4.66	9.63	8.98	
2	1963	7.23	7.51	8.85	8.97	8.16	6.18	8.69	8.41	1.191
	1966	7.25	8.23	9.80	9.02	7.57	5.82	8.19	8.11	
3	1963	7.19	8.20	9.07	8.97	8.09	5.59	8.49	8.40	2.577
	1966	5.96	8.25	9.01	7.91	8.40	5.91	9.23	9.33	
4	1963	7.00*	7.93	8.73	8.32	8.14	6.29	8.98	8.61	2.697*
	1966	5.14	7.82	7.91	8.27	8.73	6.64	9.95	9.95	
5	1963	6.31	7.73	8.04	8.45	8.49	6.90	8.82	9.26	2.384
	1966	6.07	8.13	8.54	8.45	8.25	5.94	9.74	8.88	
6	1963	7.69	9.14	9.59	9.45	7.54	5.58	7.49	7.51	1.334
	1966	7.08	9.51	9.55	9.75	7.49	4.79	8.09	7.74	
7	1963	6.94	7.85	9.19	8.21	8.22	6.09	8.79	8.69	2.520
	1966	6.19	7.94	8.63	7.69	8.86	5.93	9.31	9.43	
8	1963	6.56	8.69	8.93	8.33	8.04	5.39	8.93	9.13	2.171
	1966	5.49	8.83	8.52	7.98	8.91	5.41	9.48	9.37	
9	1963	7.15	8.30	8.55	8.61	8.36	6.45	8.42	8.15	0.629
	1966	6.39	8.30	9.61	8.30	7.91	6.45	8.67	8.36	

*significant 5 percent level or beyond

[1] PM	Puritan Morality	SOC	Sociability
IND	Individualism	CONF	Conformity
WS	Work Success	MR	Moral Relativism
FTO	Future Time Orientation	PTO	Present Time Orientation

A significant difference in value profiles in school 4 was caused by only one subscale, Puritan morality, and that score average was lower at senior testing. When the value profile of all freshman males was compared with that of all senior males, a significant difference was observed (Table 13). Freshmen were significantly higher than seniors on Puritan morality and conformity, while seniors were higher on moral relativism and hedonism. No differences were found in importance of sociability, individualism, work success, or future-time orientation.

Table 13

Mean Value Scores by Sex and Year

Year Sex	Value subscale								F-value
	PM	IND	WS	FTO	SOC	CONF	MR	PTO	
1963 Male	6.98*	8.18	8.94	8.62	8.12	5.99*	8.60	8.55	8.1712*
1966 Male	6.23	8.45	8.94	8.35	8.31	5.64	9.19*	8.90*	
1963 Female	7.12	8.19	7.79	8.42	9.04*	5.89*	8.97	8.56	17.8511*
1966 Female	7.25	9.13*	8.24*	8.69	8.69	4.66	8.93	8.39	
1963 Male	6.98	8.18	8.94*	8.62	8.12	5.99	8.60	8.55	15.1894*
1963 Female	7.12	8.19	7.79	8.42	9.04*	5.89	8.97*	8.57	
1966 Male	6.23	8.45	8.94*	8.35	8.31	5.64*	9.19	8.90	21.5756*
1966 Female	7.25*	9.13*	8.24	8.69	8.69*	4.66	8.93	8.39	
1963 Total	7.05*	8.19	8.38	8.52	8.57	5.94*	8.78	8.56	14.6901*
1966 Total	6.73	8.78*	8.59*	8.52	8.49	5.16	9.06*	8.65	

*significant 5 percent level or beyond

Personal values of females were less stable than those of males. Significant differences in value profiles were found in four of the ten schools. In schools 2, 5, and 7, females tended to change from emergent- to traditional-value orientation (Table 14). The largest change was in school 2, where the mean traditional-value score for females increased from 29.29 to 35.54 (Table 12A). In school 6, the parochial school, there was a reduction in the mean traditional score--from 35.18 to 33.53. Changes in subscale scores among the four schools showed significant increases in Puritan morality in two schools, with a decrease in the parochial school. Two schools had significant increases in individualism and future-time orientation, while three of the four schools had increases on the work-success scale. A difference in emphasis in emergent-value subscores in the four schools shows a significant decrease in emphasis on sociability and hedonism in two schools. Three schools had lower conformity scores. One school, the parochial school, had an increase in scores on moral relativism, while school 2 had a decrease on this scale. There was also a significant decrease in present-time orientation in schools 2 and 7.

Table 14

Mean Value Scores for Females by School and Year

School	Year	Value subscale								F-value
		PM	IND	WS	FTO	SOC	CONF	MR	PTO	
0	1963	7.22	8.50	7.56	8.03	8.06	6.03	9.25	9.34	0.9404
	1966	7.06	8.78	7.75	7.84	8.97	5.41	10.00	8.19	
1	1963	7.45	8.12	8.10	7.96	8.84	5.42	9.38	8.73	1.5092
	1966	7.21	8.89	8.48	8.18	8.69	4.44	9.62	8.49	
2	1963	6.93	7.52	7.02	7.81	9.55*	6.52*	9.67*	8.98*	6.8669*
	1966	8.67*	8.76	8.52*	9.59*	7.90	4.64	8.24	7.67	
3	1963	7.91	9.25	9.09	9.25	8.38	4.51	8.04	7.56	1.2475
	1966	7.27	9.69	8.93	8.62	8.24	4.24	8.51	8.51	
4	1963	6.79	7.92	7.53	8.68	9.34	6.37	8.87	8.50	0.8504
	1966	6.79	8.45	8.05	8.87	8.74	5.32	9.08	8.71	
5	1963	6.26	7.71	6.47	8.01	9.93*	6.79*	9.58	9.24	7.6096*
	1966	7.30*	8.78*	7.61*	8.34	9.07	5.20	9.13	8.57	
6	1963	8.32*	8.84	8.55	9.48	8.60	5.32	7.65	7.24	3.6024*
	1966	7.45	9.51	7.77	8.80	9.08	4.62	8.68*	8.08	
7	1963	7.02	7.85	7.82	8.29	8.97	5.91*	9.24	8.89*	9.7689*
	1966	7.27	9.30*	8.79*	9.08*	8.36	4.24	8.73	8.23	
8	1963	6.85	8.74	8.02	8.43	9.05	5.65	8.92	8.34	2.1494
	1966	6.64	9.60	8.14	8.73	9.07	4.45	8.57	8.79	
9	1963	6.55	7.42	7.94	8.26	9.13	6.94	8.81	8.97	1.8129
	1966	7.19	8.65	7.90	8.58	8.42	5.19	9.55	8.52	

*significant 5 percent level or beyond

Senior females differed significantly in the value profile from freshman females (Table 13). Seniors had significantly higher scores on individualism and work success, while freshmen had sfgnificantly higher scores on sociability and conformity. No differences could be demonstrated in the remaining four value scales.

Thus, in the four schools which had significant differences between freshmen and seniors in value profiles, a definite pattern appears. Significant subscale differences showed increases in traditional values and decreases in emergent values, which is further confirmed by an increase in mean traditional scores for females from 31.53 in 1963 to 33.32 in 1966; their average emergent scores decreased from 32.47 in 1963 to 30.68 in 1966.

When the value profiles of the 1,365 students as freshmen and as seniors were compared, a significant difference was found. Freshmen were significantly higher than seniors in Puritan morality and conformity; seniors were higher on individualism, work success, and moral relativism.

Males and females differed in value profiles both as freshmen and as seniors. Male seniors were significantly higher than female seniors on work success and conformity, but lower on sociability, Puritan morality, and individualism. Freshmen males were higher than female freshmen on work success, but lower on sociability and moral relativism.

The Teachers. Personal-value subscore means of teachers and their students are shown in Table 15.

Table 15

Comparison of Mean Value Scores of Teachers and Seniors

Sex Group	Value subscale							
	PM	IND	WS	FTO	SOC	CONF	MR	PTO
Males								
Teachers	7.14	9.53	8.58	8.68	7.78	4.22	9.69	8.37
Students	6.23	8.44	8.94	8.34	8.31	5.64	9.19	8.90
Females								
Teachers	7.27	10.09	7.56	8.36	8.16	4.13	9.81	8.59
Students	7.25	9.13	8.24	8.69	8.69	4.66	8.93	8.39
Total								
Teachers	7.19	9.75	8.19	8.56	7.93	4.18	9.74	8.46
Students	6.72	8.78	8.59	8.51	8.49	5.16	9.06	8.65

Teachers generally placed more emphasis upon Puritan morality, individualism, and moral relativism, and less on work success, sociability, and conformity than did students. Also, the teachers tended to have a more traditional overall value orientation than did students, particularly the male students (Table 16).

Table 16

Comparison of Mean Traditional and Emergent Scores for Teachers and Senior Students

Sex Group	N	Mean traditional-score	Mean emergent-score
Males			
Teachers	226	33.93	30.07
Students	701	31.96	32.04
Females			
Teachers	145	33.31	30.67
Students	664	33.32	30.68
Total			
Teachers	371	33.69	30.31
Students	1,365	32.62	31.38

Personal values appear to be related to the subject area in which the teacher specialized. Science-mathematics teachers and language teachers were significantly higher on individualism than were teachers in the vocational areas. Art and music teachers were much more future-time oriented than were the others, especially the language teachers. Conversely, the language teachers were high on moral relativism in comparison with the business teachers. No differences were found among the groups of teachers on other subscales.

The teacher groups highest on traditionalism were in art and music, business, and science. Each had mean traditional scores well above the 33.69 mean for all teachers. The language teachers were the most emergent group.

Age of teacher was definitely related to personal values. Young teachers (under 30 years) scored significantly lower than the other age groups on Puritan morality, and significantly higher on sociability, moral relativism, and hedonism. The mean traditional scores increased progressively from 32.54 for the under-30-years group, to 41.20, for those over 60 (Table 17). A similar pattern is found when values are categorized by years of teaching experience. These findings that older teachers are more traditional confirm results of other studies on the personal values of teachers.

Table 17

Mean Traditional and Emergent Scores of Teachers by Age

Age	N	Mean traditional-score	Mean emergent-score
20-29	161	32.54	31.46
30-39	110	33.96	30.04
40-49	58	34.40	29.60
50-59	37	35.73	28.27
60 plus	5	41.20	22.80
Total	371	33.69	30.31

The female teachers had a value profile significantly different from that of the male teachers. The difference, however, appeared to be primarily in their feeling about the work-success ethic; male teachers were significantly higher on this subscale.

PERSONAL VALUES AND FRIENDSHIP PATTERNS

A strong relationship was expected between personal-value profiles and the popularity of students. Student popularity or acceptance was determined by asking each student to identify his three best friends in his high school class. After the sociometric data were reviewed, an arbitrary decision was made that, to be an accepted student, the individual would have to have been named as best friend by at least four persons when a freshman and by at least one as a senior. Generally, the student chosen by four or more as a freshman was also chosen by a substantial number as a senior, and often by the same persons. Rejected students (selected as an opposite number for the accepted student) were those chosen by no more than one friend in the freshman or the senior year. Profile analyses were run to determine whether differences existed between the value profiles of the accepted and the rejected students. The sample included 311 (132 male, 169 female) in the accepted and 264 (167 male, 97 female) in the rejected categories. Data were analyzed by sex, school, and total. Comparisons of value profiles of all accepted and all rejected students produced an F-value of 2.85, significant at the 5 percent level (Table 18). Further, the accepted students were significantly higher on present-time orientation and significantly lower on future-time orientation than were students classed as rejected. No differences were found between the groups on the other six value subscales. Significant differences in value profiles were found only in school 7, where the profiles for males and the combined male-female group again showed accepted students as being higher in hedonism and lower in future-time orientation than rejected students.

Table 18

Comparison of Value Profiles of 311 Accepted and 264 Rejected Students

Status of student	Value subscale								F-value
	PM	IND	WS	FTO	SOC	CONF	MR	PTO	
Accepted	7.10	8.04	8.23	8.14	8.66	6.00	9.02	8.71*	
Rejected	7.17	8.29	8.66	8.72*	8.38	5.96	8.62	8.20	2.846*

*significant 5 percent level or beyond

Since the accepted student was significantly more present-time oriented than the rejected student among the males and among the total male-female group, the generalization can be made, for this sample, at least, that time orientation was related to acceptance or rejection by peers. The more popular student appeared to be the one who lived for today without much concern for the future. This generalization is further supported by the fact that in only two of the schools did the mean present-time-orientation score for accepted students surpass that for hedonism.

Further evidence of the emergent orientation of the accepted student was found by comparison of mean traditional-emergent scores for the groups. Accepted students had a mean emergent score of 32.40, compared with 31.38 for the entire sample of 1,365 students. Rejected male and female students scored 33.23 and 34.24 on traditional, compared with a mean of 32.62 for all in the study. No other demonstrable differences in values were found between accepted and rejected students.

Student friendship patterns were also identified by comparison of the values of students within each school who listed each other as best friends.

Correlations were run between the value subscale scores of mutually selected students in each school in 1963 and in 1966. Also, correlations were determined between the values of students who selected each other as friends both as freshmen and as seniors.

Comparison of freshmen values among schools showed significant correlations in three schools on work success and in two schools on conformity (Table 19).

Table 19

Significant Correlations Between Values of Mutual Friends--Freshmen, by Schools, Sex, and Total
563 Pairs (314 Female, 249 Male)*

School	Sex	Value subscale							
		PM	IND	WS	FTO	SOC	CONF	MR	PTO
1	Female	-	-	0.328	-	-	-	-	-
1	Total	-	-	0.271	-	-	-	-	-
2	Total	-	-	0.358	-	0.374	-	-	-
4	Male	-	-	0.422	-	-	0.414	-	-
6	Male	-	-	-	-	-	0.388	-	-
6	Total	-	-	-	0.274	-	0.328	0.243	-
8	Female	-	0.395	-	-	-	-	-	-
All	Male	-	-	-	0.166	-	-	-	-
All	Female	-	0.189	0.142	-	-	0.180	0.140	-
All	Total	-	0.142	0.156	0.139	0.100	0.144	0.135	0.082

*Blanks indicate correlations were too small to be significant at 5 percent level--Correlations shown are significant at 5 percent level or beyond.

In these instances, a positive relationship existed between how friends rated work success and how they rated conformity. No extensive relationship between friends was found on the remaining six scales. When all pairs of students who selected each other as freshmen were compared, significant correlations were obtained on individualism, work success, future-time orientation, sociability, conformity, moral relativism and present-time orientation. Results were similar for those identified as mutual friends when seniors (Table 20). Female friends were similar in Puritan morality, individualism, sociability, and conformity, while male friends tended to place similar importance on future-time orientation, and conformity. When the males and females were considered as a group, significant correlations were found among friends on all subscales except moral relativism.

Table 20

Significant Correlations Between Values of Mutual Friends, 1966--by Schools, Sex and Total--640 Pairs of Students* (352 Female, 288 Male)

School	Sex	Value subscale							
		PM	IND	WS	FTO	SOC	CONF	MR	PTO
1	Male	-*	-	-	-	-	-	-	0.549
2	Male	-	-	0.387	-	-	0.508	-	-
2	Total	-	-	-	-	-	0.323	-	-
3	Male	0.344	-	-	-	-	-	-	-
5	Female	0.366	0.378	-	-	-	-	-	-
5	Total	0.296	-	-	-	-	-	-	-
6	Female	-	-	-	-	-	0.407	-	-
6	Total	-	-	-	0.223	-	0.266	-	-
7	Female	-	0.257	-	-	-	0.264	-	-
7	Total	-	0.271	-	-	-	-	-	0.240
8	Total	-	-	-	-	-	-	0.224	-
All	Male	-	-	-	0.124	-	0.146	-	-
All	Female	0.135	0.175	-	-	0.126	0.158	-	-
All	Total	0.184	0.147	0.092	0.100	0.094	0.171	-	0.091

*Blanks indicate correlations were too small to be significant at the 5 percent level. All correlations shown are significant at the 5 percent level or beyond.

Relationships among values of students who selected each other as friends both as freshmen and as seniors were particularly high in the parochial school on Puritan morality for both males and females and on future-time orientation, sociability, and moral relativism for the combined groups in this school. Little relationship was found among value subscales in other schools (Table 21).

Table 21

Significant Correlations Between Values of Mutual Friends Both Years--by School, Sex, and Total
147 Pairs* (85 Female, 62 Male)

School	Sex	Value subscale							
		PM	IND	WS	FTO	SOC	CONF	MR	PTO
5	Female	-	0.642	-	-	-	-	-	-
5	Total	-	-	-	-	0.487	-	-	-
6	Male	0.649	-	-	0.690	0.641	-	-	-
6	Female	0.654	-	-	-	-	-	0.715	-
6	Total	0.637	-	-	0.553	0.440	-	0.530	-
7	Female	-	0.644	-	-	-	-	-	-
8	Female	-	-	0.937	-	-	-	0.797	-
8	Total	0.578	-	-	-	-	-	0.639	-
All	Female	-	0.268	-	-	-	-	-	-
All	Total	0.212	-	-	-	-	0.168	-	-

*All correlations shown are significant at the 5 percent level or beyond.

Comparisons were also made between the values of students who chose the same person as his friend both when a freshman and when a senior (Table 22). This sample of students showed that males had similar value scores on Puritan morality, future-time orientation, conformity, and present-time orientation. Females in this group had similar value scores on all subscales except hedonism. When males and females were considered as a group, significant correlations were found on all subscales. High correlations among values of friends within schools were expected, but not fully realized. Correlation coefficients among value scores of pairs of friends within schools were very low, being significant in relatively few instances. Correlations on value scales among the total group of males, females, and the combined group were often significant at the 5 percent level.

Table 22

Significant Correlations Between Values of Students
and Those Whom They Chose as Friends Twice*
610 Pairs (312 Female, 298 Male)

School	Sex	Value subscales							
		PM	IND	WS	FTO	SOC	CONF	MR	PTO
1	Male	0.565	-	-	-	-	-	-	0.606
1	Female	-	-	0.344	-	0.303	-	0.269	-
1	Total	-	-	-	-	-	-	-	0.251
2	Male	-	-	-	-	-	-	-	0.325
2	Total	0.363	-	-	-	-	0.267	-	0.250
5	Female	0.418	0.376	-	-	0.342	-	-	-
5	Total	0.302	0.294	-	-	0.312	-	-	-
6	Male	-	-	-	0.301	-	-	-	-
6	Female	-	-	-	-	-	0.397	0.378	-
6	Total	0.319	-	-	0.341	-	0.243	0.276	-
7	Female	-	0.387	-	-	-	-	-	-
7	Total	-	0.288	-	-	-	-	-	-
8	Female	-	-	0.450	0.383	-	-	0.496	-
8	Total	0.290	-	-	-	-	-	0.376	-
All	Male	0.236	-	-	0.160	-	0.147	-	0.137
All	Female	0.133	0.199	0.162	0.116	0.128	0.125	0.116	-
All	Total	0.202	0.149	0.149	0.140	0.107	0.145	0.085	0.094

*All correlations shown are significant at the 5 percent level or beyond.

The data suggest that the relationship between friendship patterns and values is stronger in females than in males. When all the females were considered, significance was found on 16 out of 32 subscales, compared with seven for males. Also, significance on subscales was found for 24 groups of females and for only 18 groups of males.

The effort to relate values as identified by the Differential Values Inventory with friendship patterns as determined by student identification was only partially successful. Relationships were not nearly as clear-cut as anticipated. It is not to be concluded that the hypothesis is rejected in its entirety. The relationships found are encouraging. The primary fault may lie either in the lack of precision of the measurement instrument or the validity of the means used to identify friendships.

PERSONAL VALUES AND TEACHER-STUDENT COMMUNICATION

Teachers were asked to identify students with whom they felt they could communicate easily. Comparisons were made between the personal value subscales of the teacher and the student he listed. The objective was to test the hypothesis that no difference in personal values exists between teachers and the students with whom they communicate with ease.

The correlations between personal values, i.e. mean traditional scores of teachers and of selected students by schools, were not of sufficient magnitude to be significant. The 80 correlations between teacher and student values by school and by value subscale likewise proved disappointing. Only three correlations were significant, and two of these were negative.

Consequently, as far as this study is concerned, the hypothesis must be accepted. No demonstration was possible of significant relationships in personal values between teachers and the students with whom they could communicate readily.

Accepted-Rejected Teachers. Each year students were asked to identify the teacher whom they best understood in class. An arbitrary decision was made to divide teachers into two groups and to test the extremes, which were labeled accepted and rejected teachers. (To be in the accepted group, a teacher had to be named as best understood teacher by at least five students when he had at least 15 of the particular group--i.e. freshmen or seniors--in his classes. If he had between 10 and 15 exposures to students then he must have been named by at least 50 percent of those students. If he had over 15 in his classes he had to be named by 25 percent of these students. The rejected group consisted of those teachers listed by no more than one student and who had at least 15 of the particular class in his courses.) By this procedure, 21 teachers were identified as the best understood; in actuality they were the most popular teachers in the sample. Twenty-nine teachers were in the rejected group.

The personal-value profiles of these two groups of teachers, when compared by analysis of variance, yielded an F-value of 1.40 with 3 and 133 degrees of freedom--too small to be significant at the 5 percent level. Thus, it was not possible to demonstrate that personal values as measured by the Differential Values Inventory were related to the ability of the teacher to be understood by his students.

PERSONAL VALUES--SOCIOLOGICAL-PSYCHOLOGICAL FACTORS

Previous research by others suggests that value patterns are related to academic achievement, socio-economic level of the family, educational objectives of students, and other psychological factors. This study has responses of the same students to test administrations 3 years apart and thus provides an opportunity to compare group means, to observe trends, and to establish possible relationships between what a person values and how he achieves, the kind of vocation he elects, the curriculum he follows, and his plans for after high school.

Academic Achievement. A very distinct relationship was found between personal values and student achievement as measured by grades. Significant differences were observed among grade stratifications on most of the value-instrument subscales (Table 23). High-achieving students had high scores on individualism, work success, and future-time orientation. By comparison, students who had significantly higher scores on conformity, moral relativism, and present-time orientation were consistently "C" students or lower. Little relationship was found between achievement and how the student felt toward Puritan morality.

When the subscale scores were totaled, the result further emphasized that the traditional-oriented student, whether male or female, freshman or senior, was the high achiever. For example, the mean traditional score for students in 1963 increased progressively from 30.60 for "D" students to 35.30 for "A" students (Table 13A). The mean traditional score for all students in 1963 was 32.14. The same general pattern was repeated in 1966.

Table 23[a]

Comparison of Personal Value-Profiles of Students by Grades, Sex and Years

Grades	Sex	Value subscales															
		PM		IND		WS		FTO		SOC		CONF		MR		PTO	
		63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
A	Male	-	-	-	*	*	-	*	-	-	-	o	-	o	o	-	o
	Female	-	-	*	*	*	-	*	-	o	-	o	o	o	o	-	-
	Total	-	*	*	-	-	-	*	*	-	-	o	o	o	o	o	o
B	Male	-	-	-	*	*	*	-	*	-	o	o	o	-	o	-	o
	Female	-	-	-	*	*	-	-	-	o	-	o	o	o	o	-	-
	Total	-	*	-	-	-	*	-	*	-	-	o	o	o	o	-	o
C	Male	-	-	-	o	o	-	o	-	-	-	*	*	*	*	-	o
	Female	-	-	-	o	o	-	o	-	*	-	*	*	*	*	-	-
	Total	-	-	o	-	-	-	o	o	-	-	-	*	*	*	*	-
D	Male	-	-	-	o	o	o	-	o	-	*	*	*	-	*	-	*
	Female	-	-	o	o	o	-	-	-	*	-	*	*	-	*	-	-
	Total	-	o	o	-	-	o	-	o	-	-	*	*	-	*	-	*

[a] Tables 23-31 are designed to provide a summary of six different analyses of variance (1963 Male, 1966 Male, 1963 Female, 1966 Female, 1963 Total, 1966 Total) for the subscales of the Differential Values Inventory, stratified by certain socio-economic or personal data.

A "*" indicates a significantly high score (5 percent level); a "o" indicates a significantly low score; and a "-" indicates no significance.

For example, on the Puritan morality (PM) subscale in 1963, there were no significant differences among the scores made by males, females, or the total group when stratified by "A," "B," "C," or "D" grades (note the hyphens). The only significance found on this subscale (PM) in 1966 was for the total group. Those students who made "A" and "B" grades had significantly higher scores on Puritan morality than the "D" students. Scores of the "C" students did not differ significantly from either the "A," "B," or "D" students.

High School Curriculum. The interrelationship between grades and high school curriculum, discussed elsewhere in this report, reappears when value patterns are compared. College preparatory students (who tended to be the high-achieving students) placed high importance on the values of individualism, work success, and future-time orientation (Table 24). Students with significantly high scores on conformity and moral relativism were in a general major or were unaware of their major. Little relationship was found between high school curriculum and the values of Puritan morality, sociability, or hedonism.

Table 24[a]

Comparison of Personal Value-Profiles of Students
by Sex, Year and High School Curriculum

High school curriculum	Value subscales															
	PM		IND		WS		FTO		SOC		CONF		MR		PTO	
	63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
College																
Male	-	-	-	*	*	*	-	*	o	-	-	o	-	o	-	o
Female	-	-	*	-	-	*	-	-	-	-	-	-	-	o	-	-
Total	-	-	*	*	*	*	-	*	-	o	-	o	o	o	-	-
Business																
Male	-	-	-	-	o	-	-	o	*	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	o	o	-	-	*	-	-	-	o	*	*	-	-
Vocational																
Male	-	-	-	-	-	-	-	o	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-	o	-	-	-	-	-
Total	-	-	-	o	*	-	-	o	-	-	-	-	-	*	-	-
General																
Male	-	-	-	-	-	-	-	o	-	-	-	-	-	-	-	-
Female	-	-	o	-	-	o	-	-	-	-	-	-	-	*	-	-
Total	-	-	o	o	-	-	-	o	-	-	-	*	*	*	-	-
Don't know																
Male	-	-	-	o	-	o	-	o	-	-	-	*	-	*	-	*
Female	-	-	o	-	-	-	-	-	-	-	*	-	-	-	-	-
Total	-	-	-	o	-	o	-	o	-	*	-	*	*	*	-	-

[a] See Table 23 for interpretation of contents of this table.

* significantly high   o significantly low   - no significance

Mean traditional scores--irrespective of year or sex--were highest for the college preparatory student, ranging from 32.88 to 34.28 (Table 14A). The next-highest mean traditional score was for the small group in the vocational curriculum. Those in other curricula (business or general) tended to have values which leaned toward the emergent side, with mean scores of less than 32.00. A minor exception was the 1966 females in the business curriculum. As mentioned previously, a number of college preparatory students changed to the business curriculum in the senior year. This change possibly accounts for the increase in mean traditional scores for the business majors in 1966.

Church Attendance. Interest in religious activities as measured by frequency of church attendance confirms earlier research showing that students and their teachers in church-related schools tended to be tradition-oriented. Scores on Puritan morality, individualism, work success, and future-time scales were significantly higher for those who attended church weekly or at least every other week than for those who attended church less often (Table 25).

Table 25[a]

Comparison of Personal Value-Profiles by Sex, Year and Frequency of Church Attendance

Church attendance	Value subscales															
	PM		IND		WS		FTO		SOC		CONF		MR		PTO	
	63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
Weekly																
Male	-	*	*	-	*	-	*	*	o	-	o	o	o	o	o	o
Female	*	*	-	-	*	-	*	*	-	-	o	-	o	o	o	-
Total	*	-	*	*	*	-	*	-	-	-	o	o	o	-	o	-
Semi-monthly																
Male	-	-	-	-	-	*	-	*	-	-	-	o	-	-	*	-
Female	o	o	-	-	*	-	-	-	-	-	-	-	o	o	-	-
Total	o	-	-	o	-	-	o	-	-	-	-	-	-	-	*	-
Monthly																
Male	-	-	-	-	-	-	-	-	-	-	-	-	-	*	-	-
Female	-	-	-	-	o	-	o	o	-	-	*	-	*	o	*	-
Total	o	-	-	-	o	-	o	-	-	-	*	-	-	-	*	-
Seldom																
Male	-	-	o	-	-	o	o	-	*	-	-	-	*	*	*	-
Female	o	o	-	-	o	-	o	-	-	-	-	-	*	*	*	-
Total	o	-	o	o	-	-	o	-	-	-	-	-	*	-	*	-
Never																
Male	-	o	o	-	o	o	o	o	-	-	*	*	*	*	*	*
Female	-	o	-	-	-	-	-	-	-	-	-	-	-	*	-	-
Total	o	-	-	o	-	-	o	-	-	-	*	*	-	-	*	-

[a] See Table 23 for interpretation of contents of this table.

* significantly high o significantly low - no significance

Meanwhile, students who seldom or never attended church had significantly higher scores on the conformity, moral relativism, and hedonism subscales. On the subscales, sociability wasn't related to interest in religious activities.

It follows, then, that those who attend church weekly should and did have high average traditional scores. Their mean scores were well within the traditional range, 32.83 to 34.42, and increasing substantially for females between 1963 and 1966. Mean value scores decreased consistently with a decrease in frequency of attendance (Table 15A). Students who seldom or never attended church were much more emergent than traditional in their value orientation than were frequent church attenders.

Post-High-School Plans. Post-high-school plans, again, confirm the fact that the college-oriented student tends to be traditional in his value orientation. He scored significantly higher on individualism and on work success and was more future-time-oriented as a senior than as a freshman (Table 26).

Table 26[a]

Comparison of Personal Value-Profiles by Sex, Year
and Post-High-School Plans

Post-high-school plans	Value subscales															
	PM		IND		WS		FTO		SOC		CONF		MR		PTO	
	63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
Military																
Male	-	*	-	-	*	o	-	o	o	-	*	o	-	-	-	o
Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	o	-	-	-	o	o	-	*	*	-	-	-	-
Farming																
Male	-	-	-	o	-	-	-	-	-	-	*	-	-	o	o	-
Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	-	o	-	-	-	-	-	-	*	*	-	o	-	-
College																
Male	-	-	-	*	*	*	-	*	o	-	o	o	-	o	o	o
Female	-	-	-	*	-	*	-	-	-	o	o	-	-	o	-	o
Total	-	*	-	*	*	*	-	*	o	o	o	o	-	o	-	o
Any job																
Male	-	-	-	o	o	o	-	-	*	-	*	*	-	-	*	*
Female	-	-	-	o	-	*	-	-	-	-	*	-	-	o	-	-
Total	-	-	-	o	o	o	-	-	*	-	*	*	-	o	-	-
Undecided																
Male	-	o	-	o	*	o	-	-	o	-	*	o	-	*	-	*
Female	-	-	-	-	-	o	-	-	-	*	*	-	-	*	-	*
Total	-	o	-	o	-	o	-	o	o	*	*	*	-	*	-	*

[a] See Table 23 for interpretation of contents of this table.

* significantly high o significantly low - no significance

The student who planned to take any job available was high on conformity, and males were high on hedonism. The undecided student, especially as a senior, was high on sociability, conformity, moral relativism, and hedonism--all emergent values.

Generally, then, students with plans other than to enter college were emergent in value orientation, i.e., their mean traditional-value scores ranged from 27.35 to 32.45, well below the mean traditional score for all seniors, which was 32.63 (Table 16A).

Occupation of Father. Socio-economic level of the family as measured by occupation of the father was highly related to the value patterns of freshmen. Significant differences were found when the value profiles of either men or women were stratified by socio-economic level (Table 27).

Table 27[a]

Comparison of Personal Value-Profiles by Sex, Year and Occupation of Fathers

Fathers' occupation	Value subscales															
	PM		IND		WS		FTO		SOC		CONF		MR		PTO	
	63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
Manual																
Male	-	-	o	-	-	-	-	-	*	-	*	-	-	-	-	-
Female	-	-	-	o	o	-	o	-	-	-	-	-	*	*	-	-
Total	-	-	o	-	o	-	-	-	*	-	*	-	*	-	-	-
White-collar																
Male	o	-	-	-	-	-	-	-	*	-	-	-	-	-	-	-
Female	-	-	-	-	*	-	*	-	-	-	-	-	o	-	-	-
Total	-	-	*	-	*	-	-	-	-	-	-	-	o	-	-	-
Self-employed																
Male	o	-	-	-	-	-	-	-	*	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	*	-	-	-	-	-	-	-	*	-	-	-	-	-
Professional																
Male	-	-	*	-	-	-	-	-	o	-	o	-	-	-	-	-
Female	-	-	-	*	-	-	-	-	-	-	-	-	-	o	-	-
Total	-	-	*	-	*	-	-	-	o	-	o	-	o	-	-	-
No answer																
Male	*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Female	-	-	-	-	*	-	*	-	-	-	-	-	-	-	-	-
Total	-	-	*	-	*	-	-	-	-	-	-	-	o	-	-	-

[a] See Table 23 for interpretation of contents of this table.

* significantly high o significantly low - no significance

2

Freshman males with fathers in the manually-skilled occupations were low in individualism and high on sociability and conformity. Those whose fathers were self-employed or white-collar workers were high on sociability and low on Puritan morality. Freshman females with fathers in the manually-skilled trades were low on work success and future-time orientation, while high on moral relativism. When all freshmen were compared, the offspring of manually-skilled workers had significantly low scores on individualism and work success (traditional values) and significantly high scores on sociability, conformity, and moral relativism (emergent values). Children of professional workers had high scores on individualism and work success, and were significantly lower than others on sociability, conformity, and moral relativism.

For some reason, the impact of the socio-economic level of the family diminished between the freshman and senior years. No significant differences could be found when the value profiles of senior men or the total groups were stratified into four socio-economic levels. Significance was found between value profiles of senior women, but differences were limited to two subscales. Women with fathers in the professions were significantly higher on individualism and significantly lower on moral relativism than women whose fathers were manually-skilled workers. This is also evident in comparison of mean traditional scores for each socio-economic group (Table 17A).

This lack of significant differences suggests that the impact of the family as ~~a~~ source of values may decrease between the freshman and senior years, giving way to things in the immediate environment, such as friends, academic studies, and vocational plans.

Occupational Choice of Student. The desired socio-economic level of students as measured by his occupational choice shows that the male who chose a low-level vocation (manually-skilled field) was significantly higher than most of his peers in interest in sociability, conformity, moral relativism, and hedonism (Table 28). In contrast, the males electing one of the professions generally had higher regard for individualism, work success, and future-time orientation than did males choosing other vocations. Individualism and future-time orientation were also important to males selecting white-collar occupations.

Table 28[a]

Comparison of Personal Value-Profiles by Sex, Year and Area of Student Occupational Choice

Student occupational choice	Value subscales															
	PM		IND		WS		FTO		SOC		CONF		MR		PTO	
	63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
Manual																
Male	-	-	o	o	o	o	-	-	*	-	*	*	*	-	*	*
Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	o	o	o	o	-	-	*	-	*	*	*	-	*	*
White-collar																
Male	-	-	*	*	-	-	*	*	o	o	-	o	o	-	*	o
Female	-	-	-	-	-	-	-	-	-	-	-	*	*	-	-	-
Total	-	-	*	*	-	-	o	-	*	-	-	o	*	-	*	o
Self-employed																
Male	-	-	*	o	-	-	*	-	o	-	-	*	o	-	o	-
Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	-	-	*	o	*	-	*	-	o	-	-	-	o	-	o	-
Professional																
Male	-	-	*	*	*	*	*	*	o	-	o	o	o	-	o	-
Female	-	-	-	-	-	*	-	-	-	-	-	o	o	-	-	-
Total	-	-	*	*	*	*	-	-	o	o	o	o	-	-	o	o
Undecided																
Male	-	-	-	o	o	-	o	o	*	*	-	*	-	-	-	-
Female	-	-	-	-	-	o	-	-	-	-	-	*	-	-	-	-
Total	-	-	-	-	-	o	o	-	*	*	-	-	-	-	-	-

[a] See Table 23 for interpretation of contents of this table.

* significantly high   o significantly low   - no significance

Students undecided about their future vocations tended toward an emergent-value orientation, but not quite as strongly as those in the manually-skilled occupations. When the subscales for seniors were combined, further evidence was found fot the traditional nature of those choosing one of the professions or white-collar occupations, with respective mean traditional values of 33.80 and 33.22 (Table 18A). Those who were undecided or who chose either a manually-skilled or a self-employed occupation had emergent values ranging from 32.77 to 34.25.

Type of Community. Significant differences in the value profiles of students were found between the kind of community in which they lived.

However, differences tended to be limited to individual subscales rather than to general-value orientation (Table 29). Students in industrial communities made significantly higher scores on moral relativism than did those in agricultural and suburban communities. Those in the industrial community also placed high on sociability, as did those in the suburban community. Women in the industrial and agricultural communities were higher on conformity than suburban women. The suburban female leaned more toward the traditional side, with high scores for independence, work success, and future-time orientation. In contrast, the male suburbanite was high on sociability and hedonism.

Table 29[a]

Comparison of Personal Value-Profiles of Seniors by Sex and Kind of Community

Kind of community	Value subscales							
	PM	IND	WS	FTO	SOC	CONF	MR	PTO
	66	66	66	66	66	66	66	66
Industrial								
Male	-	-	-	-	-	-	*	-
Female	-	o	o	o	-	*	*	-
Total	-	-	-	-	*	-	*	-
Agricultural								
Male	-	-	-	*	o	-	o	o
Female	-	o	-	-	-	*	-	-
Total	*	o	-	-	o	*	o	o
Suburban								
Male	-	-	-	o	*	-	-	*
Female	-	*	*	*	-	o	o	-
Total	o	*	-	-	*	o	o	*

[a] See Table 23 for interpretation of contents of this table.

* significantly high o significantly low - no significance

The relationship of community type to student values was not dynamic. When the subscale scores are combined, the mean traditional and emergent scores for each community fall very close to the mean for the entire group (Table 19A).

Size of School. The size of school--anticipated to have a bearing upon value patterns of students--had a less than spectacular relationship to student values (Table 30). No significant difference in value profiles of males or females was found between schools of different size. Profiles for the combined group were significant, though barely. Students in small schools were more future-time-oriented, while students in medium-sized schools placed more emphasis on work success. Those in large schools placed high importance on sociability. No relationship was found between the remaining value subscales and school size.

Table 30[a]

Comparison of Personal Value-Profiles by
Sex and School Size

School size	Value subscales							
	PM	IND	WS	FTO	SOC	CONF	MR	PTO
	66	66	66	66	66	66	66	66
Small								
Male	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-
Total	-	-	-	*	o	-	-	-
Medium								
Male	-	-	-	-	-	-	-	-
Female	-	-	-	-	-	-	-	-
Total	-	-	*	o	-	-	-	-
Large								
Male	-	-	-	o	-	-	-	-
Female	-	-	-	-	-	-	-	-
Total	-	-	o	-	*	-	-	-

[a] See Table 23 for interpretation of contents of this table.

* significantly high o significantly low - no significance

Among the Schools. Differences between the sexes in their values differed among the schools. Table 31 reveals that school 6 was generally highest on traditional values and lowest on emergent values for males, females, and totals, in both 1963 and 1966. Between 1963 and 1966, students in school 5 changed from high-emergent low-traditional to an average group. A reverse trend was found in school 4: students changed from average in 1963 to emergent in 1966. School 2 tended to change from average to traditional in the three-year period. Students in schools 7, 8, and 9 had rather average value patterns, with no change apparent between the freshman and senior years.

Table 31[a]

Comparison of Personal Value-Profiles by Schools, Years and Sex

School	Sex	Value subscales															
		PM		IND		WS		FTO		SOC		CONF		MR		PTO	
		63	66	63	66	63	66	63	66	63	66	63	66	63	66	63	66
0	Male	-	-	-	-	-	-	o	-	-	-	-	-	*	-	-	-
	Female	-	-	-	-	-	-	-	o	o	-	-	-	-	*	*	-
	Total	-	-	-	-	-	-	o	o	o	-	-	-	-	*	-	-
1	Male	-	-	-	-	-	-	-	-	-	-	o	o	-	-	-	-
	Female	-	-	-	-	-	-	o	-	-	-	o	-	*	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	o	-	-	-	-
2	Male	-	*	o	-	-	*	-	-	-	-	-	-	-	-	-	-
	Female	-	*	-	-	-	-	-	*	-	-	-	-	-	o	-	-
	Total	-	*	o	-	-	*	-	-	-	o	-	-	-	o	-	-
3	Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	*	-	*	*	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	o	-	-	-	-	-
4	Male	-	o	-	o	-	o	-	-	-	-	-	*	-	*	-	*
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	o	-	o	-	o	-	-	-	-	-	*	-	-	-	*
5	Male	o	-	-	-	o	-	-	-	*	-	*	-	-	-	*	-
	Female	o	-	-	-	o	o	-	-	*	-	-	-	-	-	-	-
	Total	o	-	-	-	o	-	-	-	*	-	*	-	*	-	*	-
6	Male	*	*	*	*	*	-	*	*	o	o	-	o	o	o	o	o
	Female	*	-	-	-	-	-	*	-	-	-	-	-	o	-	o	-
	Total	*	-	*	*	*	-	*	*	-	-	-	-	o	-	o	o
7	Male	-	-	-	-	-	-	o	o	-	-	-	-	-	-	-	-
	Female	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Male	o	-	-	-	-	-	-	-	-	*	-	-	-	-	-	-
	Female	-	o	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	*	-	-	-	-	-	-
9	Male	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Female	-	-	o	-	-	-	-	-	-	-	*	-	-	-	-	-
	Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a] See Table 23 for interpretation of contents of this table.

* significantly high　　o significantly low　　- no significance

The above observations from the subscale scores are confirmed by mean traditional scores (Table 12A). Men as a group tended to become more emergent, whereas females became decidedly more traditional.

References

1. Edwards, T. Bentley, and Wilson, Alan B., "A Study of Some Social and Psychological Factors Influencing Educational Achievement," (USOE Contract SAE 7787), University of California, June, 1961.

CHAPTER V

SUMMARY

The values of our society are in transition. While this could be said for any society in history, current changes are far more important to educators because they see these changes occur and realize the impact upon the environment in which they live and work. Recent sit-ins, lie-ins, cases of civil disobedience, and riots have forced even the most reluctant to realize that still further changes are being demanded.

The changes in values which are generally of most concern are those dealing with our accepted moral structure. The usually slow processes of social change do not satisfy the modern impatient youth. The crux of the problem is the conflict between what is and what should be according to some. This study was designed to gain a better understanding of what is, i.e. the values of high school students. Knowledge of the values of students should be beneficial to persons who wish to study change. The summary which follows is presented in abstract form for purposes of clarity. The reader is reminded that interpretations of these data are restricted to the 1,365 students from ten central California high schools. Generalizations beyond this sample have not been justified.

THE TEST GROUP--STUDENTS

The students in this group appear to be a typical group of California teenagers tested at a time in their lives during which many important decisions are being made.

1. Most of the students, even as freshmen, were in a definite high school curriculum which they easily identified. Some changed majors by the senior year. Some of the college preparatory students, because of a change of interest or a realization of a limitation of abilities, changed to majors with less demanding academic requirements.
2. Most freshmen (over 90 percent) identified a vocation which they hoped to enter eventually. Males had a slight tendency to select occupations in the same general socio-economic category as that in which their fathers were employed. Females generally chose occupations in the white-collar class, i.e. teacher, nurse, stewardess, or social worker. Indecision about future vocation increased to about 20 percent by the senior year. A high proportion

of seniors chose either the same vocation or one in the same general area as when they were freshmen. Changes in choice usually reflected an upward socio-economic trend, except for a number of freshmen who changed from one of the professions to a white-collar occupation. Students appeared quite realistic in the selection of an occupation: high-achieving students tended to select occupational areas which have high academic demands, while average achievers tended to select vocations with less demanding requirements.

3. Further evidence of the ability of the high school student to plan his future and the persistence of the decision made as a freshman was shown in his post-high-school plans. Over three-fourths of those who planned for college as freshmen still had college as their goal as seniors. Only one-fifth who were undecided about their future plans as freshmen were still undecided as seniors. Most of those undecided as freshmen chose college when seniors. While the 80 percent who gave post-high-school-education as their goal would have been considered an extremely high percentage several years ago, and still is in some states today, it is not unrealistic in California.
4. These students tended to come from homes having both parents. The one in nine who came from an atypical home was, in all probability, living with his mother. This ratio increased to one in six from an atypical home by the senior year, indicating that even the family structure is in transition.
5. Mothers who were employed either part-time or full-time outside the home were common for these students. The proportion of working mothers increased from 42.5 percent for freshmen to 49.0 percent for seniors. The trend was toward part-time workers and new entries to full-time work.

THE TEST GROUP--TEACHERS

Teachers in the study tended to be young; consequently, over half have been in the classroom fewer than five years. Almost two-thirds of the group were men. Since those with long teaching experience tended to be women, the inference can be made that the proportion of men entering teaching in the secondary schools is increasing.

OCCUPATIONAL VALUES

The occupational-values scale provided additional valuable information on what is important to high school students. The null hypothesis tested was that there would be no difference between freshmen and seniors in occupational values.

Students, both as freshmen and as seniors, were unanimous in their desire for an occupation which would be interesting and challenging, and would provide them an opportunity for identity--a place where they could express their individuality. They placed high priority on security and the opportunity to help others. They also wanted their job to help them gain esteem and recognition, and they wanted to be able to work independently for high pay, although these last two were less important than the previous four characteristics. Students rejected the idea of having their occupation place them in the role of a boss or a leader.

Occupational values did differ between males and females and between freshmen and seniors. They were also related to academic achievement. For example, the high-achieving student was more interested in personal recognition and leadership through his vocation than was the low-achieving student. What the student felt important in considering a vocation was also related to the vocation of his father and his own vocational choice. For example, student interest in security through his vocation was greater in the student whose father was a low-level skilled worker than in the student whose father was a professional. Also, the student who wanted to be self-employed was more interested in being boss and working independently than was the student who chose another occupation.

Changes in occupational values between the freshman and senior years were found in only three of the ten value characteristics. The importance of security, high pay, and a desire to help others through a vocation declined significantly for both males and females during the three years. Consequently, the hypothesis can be rejected that no differences in occupational values would be found between freshmen and seniors. However, differences were related to factors such as ability and interest.

Occupational values of teachers provide a good yardstick with which to compare student values. Since teachers are in the labor force, their rating of the ten occupational values presumably represents mature judgment and true feelings gained through experience. When teacher values were compared with student occupational values, a surprising similarity appeared.

Teachers placed extremely high importance on having their vocation provide them interesting experiences, the opportunity for self-expression, and the opportunity to help others--three of the four values to which students gave top priority. Teachers placed less emphasis upon security and high pay than did students, and this is explainable: teachers have jobs, tenure, salary schedules, and other benefits which lead to economic security. Teachers also were more interested in being leaders and in being independent in their vocation, which may be symbols of maturity.

PERSONAL VALUES

The Differential Values Inventory provided much information on what students really felt was important to them. The major purpose of the study, to measure possible changes in personal values during high school, was approached by testing the null hypothesis (i.e., that there will be no difference in personal values between students as freshmen and the same students as seniors). Whether one accepts or rejects the null hypothesis depends entirely upon the grouping one chooses to use.

When tested independently by analysis of variance, value profiles of males as freshmen and as seniors in each of the ten schools showed a significant difference in only one school. Duncan's multiple-range test showed that only one of the eight subscales (Puritan morality) had a large enough difference in that school to be significant (5 percent level).

Profile analysis of freshman and senior females resulted in significant differences in four schools. In brief, females in these four schools tended to change from emergent- to traditional-value orientation. For example, their interest in the work-success ethic increased and their need for conformity decreased.

Thus, when tested by school and according to sex, the hypothesis that there was no difference becomes difficult to reject, especially when one considers only males. Demonstrable differences occurred in only five of the twenty possible profile comparisons, and four of these were females. The numbers in each profile ranged from 31 to 133, with a mean of 68. Degrees of freedom were moderately large.

When the value profiles of all in the study (664 females and 701 males) were compared by year, sex, and total, each set of profiles was significantly different at the 1 percent level. Obviously, there are a large number of degrees of freedom in these analyses of variance, even when using the conservative F test.

Consequently, when one talks about differences in personal values of students in this sample, disregarding schools, there is no alternative but to reject the hypothesis. Personal values of students were different when seniors, and these differences were found throughout six of the eight subscales. The two subscales in which practically no demonstrable differences occurred were hedonism and future-time orientation. Apparently, if a student was hedonistic or future-time-oriented as a freshman, he was also hedonistic or future-time-oriented as a senior.

The Differential Values Inventory also provided a new dimension of information on teachers. Their personal values were found to differ between teachers with different subject-matter specializations. The academic subject-matter teachers (science, language, history) were particularly high on individualism.

Teachers differed in value orientation from their students. They were less interested in sociability, conformity, and work success than students, and more concerned with Puritan morality, individualism, and moral relativism. This high interest in moral relativism comes primarily from the young teachers who had a mean score of over 10.00 on this subscale, compared with 9.06 for all students. Business teachers had the highest mean traditional score.

Older teachers were more traditional than younger teachers, and this was a linear relationship. Young teachers see much more importance in conformity, sociability, and hedonism than do older teachers.

PERSONAL VALUES AND FRIENDSHIP PATTERNS

Research suggests that friendship patterns are related to personal values. The hypothesis for this study was that no relationship existed between personal values and friendship patterns.

Accepted-Rejected Students. When the personal-value profiles of the total accepted group were compared with those of the rejected group, significant differences were found. The differences, however, were limited to two subscales--hedonism and future-time orientation. Rejected students apparently were future-time-oriented, while accepted students tended to live for today. No other differences were found when groups were stratified by sex and by school.

Mutual Friends. Comparisons of personal values of mutual friends for the most part produced very small correlation coefficients. Significant r values were limited almost exclusively to total groups of males and females and a combination of the two. Some indication was shown that a demonstrable relationship might exist between friends on how they felt about the work-success ethic and about conformity to group standards. The relationship between personal values and friendship may be closer for females than for males. Correlations on each of the value subscales between the 563 pairs of friends in 1963 and the 640 pairs of friends in 1966 produced small, though significant (5 percent level), correlations on all of the eight value subscales except Puritan morality in 1963 and moral relativism in 1966.

Whether the hypothesis of no relationship between the personal values of friends is accepted or rejected becomes, again, dependent upon the group one considers. In considering friendships within schools, one would have to accept the hypothesis. Of the 1,056 correlations, only a small number were large enough to be significant at the 5 percent level, scarcely enough to indicate any true relationship. However, if one is willing to accept the larger group as his sample (i.e. all males, all females, or a combination of the two), then the hypothesis can be rejected, and the statement can be made that friendship patterns are related to values held by the two parties. This discussion, of course, is limited to the definition of friends as used in this study and to the measures of personal values that were employed.

PERSONAL VALUES--TEACHER-STUDENT COMMUNICATION

The hypothesis has to be accepted that there would be no relationship between the value patterns of teachers and students with whom they could communicate easily. No significant relationship was shown in either mean traditional values or value subscales between teachers and those students with whom they felt they could easily communicate.

Also, it was not possible to demonstrate that personal values of teachers who were accepted by students were any different from those teachers who were rejected. The accepted and rejected teacher was classified by the number of times students named him as the teacher they understood best in class.

PERSONAL VALUES--SOCIO-PSYCHOLOGICAL FACTORS

The hypothesis can be rejected in several instances that no difference in personal values exists between students stratified by certain socioeconomic and psychological factors.

When academic achievement was considered, significance was found among all the profile groups. In essence, the high achiever is a traditionallyoriented student, while the low achiever tends to have emergent values.

The college preparatory student is more traditional in his values than students in other curricula. He is high on individualism, believes in the work-success ethic, and is future-time-oriented. Students in the general major had high scores on conformity and moral relativism.

Frequency of church attendance and personal values were significantly related. The frequent church attender had traditional values in contrast to the nonattender, who is inclined to have an emergent orientation.

The socio-economic level of the family as measured by father's occupation was related to the socio-economic level aspired to as measured by occupational choice of the student. Those in the low socio-economic group as freshmen placed minor importance on individualism and work success and high importance on sociability, conformity, and moral relativism. In other words, they tended to be emergent in their value structure. However, when seniors, little difference in values could be attributed to socio-economic level of family.

When making vocational choices, students choosing low-level occupations tended to have emergent values, while those in the professions were high on such subscales as individualism, work success, and future-time orientation--traditional values.

Thus, personal values as measured by the Differential Value Inventory are related to student achievement, religious participation, and other personal factors.

CHAPTER VI

CONCLUSIONS AND IMPLICATIONS

The initial purpose of this study was to determine whether the personal values of students change during high school. As this idea was developed, companion (though subsidiary) objectives were conceived. One was to determine whether the ability of a student to understand his teachers was value-related. Another was to investigate the role that values might play in interpersonal relations among students. Still another dealt with determination of any relationships between socio-economic factors, psychological factors, and educational objectives and value patterns of students.

The profile analysis modification of analysis of variance proved a most useful device in testing the hypotheses, for it permitted comparison of the value profiles among the various groups.

CONCLUSIONS

Analysis of the massive volumes of data accumulated, interviews with students, and general observations by the investigator and the research assistant have led to the following conclusions:

1. Conducting longitudinal studies of student characteristics in the modern high school is possible without undue interruption of the school's educational program and without arousing the suspicions of the sort of individuals who oppose all kinds of psychological or sociological research in public schools. The schools in this study were able to include this testing in their scheduled testing program or to integrate it into a class situation where the testing of values was appropriate.
2. While measures of values by a paper-pencil test have many recognized weaknesses, the results of this study bolster the investigator's confidence in this means of learning what students cherish. Evidence of the validity and reliability of the value-measuring instrument appears repeatedly throughout the findings. Responses to the items showed that the students were sincere in expressing their true feelings.
3. Personal values are quite stable by the time students enter high school. Although females as seniors tended toward a more traditional value orientation, this may be only an indication of earlier maturation.

4. Personal value patterns of students are related to the kind of community in which the school is located, the size of the school, and whether it is a public or private (parochial) school.
5. Friendship patterns of students are related to their personal values, although no distinct pattern could be found except on group characteristics.
6. Personal values of high school students are definitely related to their occupational choices, academic achievement, educational objectives, and participation in religious activities.
7. Ability of students to understand their teachers was not related to their personal value patterns.
8. The occupational-values scale proved to be a very worthwhile instrument for measuring what both students and teachers thought to be important in a vocation. Both youth and adults want their occupations to provide pleasure and the opportunity to help others, and they both tend to shun the responsibilities of leadership and supervision.
9. Personal-value profiles of teachers were related to their subject-matter specialization, age, and religious participation.
10. No relationship existed between the value patterns of teachers who were readily understood and those who were less easily understood by students.

IMPLICATIONS

For the Educator. This study contributes to research literature which suggests that personal values, once interiorized, become relatively stable within the personality of the individual. The age when values become fixed has not yet been determined; however, previous research suggests that college experience has little impact upon student values. Now this study suggests that dramatic changes do not generally occur during the high school years.

Since most values of youth are apparently acquired prior to the high school years, curricula specifically directed to the establishment of cultural values should be emphasized during the pre-high-school years, even as early as pre-primary. High school curricula intended to teach human values will perhaps not produce dramatic permanent change in what these students already believe. However, such instructional content should not be eliminated. The emphasis during high school should be directed to the reinforcement of the so-called "culturally-approved" values, thereby possibly reducing the influence of socially deviant behavior tendencies.

Schools may wish to use the Differential Values Inventory on an experimental basis to identify the emergent and the traditional student. Undoubtedly the emergent student, who places high importance upon present-time orientation, and the traditional student, who is future-time oriented, will respond differently to the same motivational influences. Measurement of personal values, then, could provide the school with another means to identify individua differences.

This study should be of significant interest to educators responsible for programs to rehabilitate youth who, through their behavior, have demonstrated that their personal values do not fall within the boundaries acceptable to society. Correctional programs face an almost insurmountable task if personal values must be changed before rehabilitation can take place. A measure of the delinquent's personal values may help the re-educational process of the individual by identifying the areas where value differences occur.

The occupational-values scale indicates that youth are seeking new experiences in their future occupations: they want to help others and they seek security, but they avoid leadership roles as a part of their future vocations. Educators and counselors should recognize and use this information in curriculum building and in counseling youth.

For the Parent. Neither occupational nor personal values of youth differed greatly between the time they were freshmen and seniors. This should reemphasize to parents the real importance of early childhood education provided by the family and by social institutions. Parents may be misled by expecting the high school to correct some of their child's value-directed behavior. The real cause of his misbehavior may have become an unshakable part of the child's personality long before he reached high school. Any value change during the high school years is not likely to be an incidental result of that experience.

With professional guidance and knowledge of their child's personal values, parents may be able to motivate that child toward desired action. For example, if the child is hedonistic, immediate reward may be much more effective than the promise of delayed gratification.

For the Researcher. This study, while not an in-depth analysis of personal values, does reinforce some feelings about what youth cherish. Specifically, it suggests the following facts. (1) The inventory approach, using a group testing situation, can yield valid and reliable information on what students think is important. (2) Group characteristics can be identified, and they correlate with external criteria. (3) Public school administrators are interested in participating in psychological research which does not necessarily have a problem-solving function. (4) Students will give serious thought to the test items which attempt to measure their feelings. (5) There will be an extremely high consistency of response after a three-year time interval which strengthens the conviction that students expressed their true feelings initially. (6) The profile analysis procedure developed for determining statistical significance is a very useful means to compare value profiles, especially when the ipsative nature of the data prevents comparisons among value subscales.

This study leaves many unanswered questions about personal values of youth, each of which could be the focus of future research. Examples of these are the following:

1. How well-established are the personal values of students in junior high school and in the intermediate, elementary, or primary grades?
2. Is there any relationship between the intellectual ability of the student and his value profile and the time at which he acquired these values?
3. What influence upon learning might occur by grouping students in sections by personal value patterns, taught by instructors with values similar to those of the students or by instructors with value patterns quite different from those of the students?
4. Could additional value subscales be added to the *Differential Values Inventory*, e.g. political beliefs (liberal-conservative)? Would such additions make the inventory more definitive?

BIBLIOGRAPHY

Albrecht, Milton C., "Does Literature Reflect Common Values?," American Sociological Review, 21:722-729, November, 1956.

Armstrong, Hubert C., "The Place of Values in American Education," California Journal of Elementary Education, 23:141-154, February, 1958.

Butner, Irma N., "Valuations Expressed by College Students Relative to Education, Work, Family Life, and Leisure," Ph.D. dissertation, Iowa State College, 1956.

Carpenter, M., "How Can We Teach Values?," Journal of the National Association of Women Deans and Counselors, 22:26-31, October, 1958.

Crane, A. R., "The Development of Moral Values in Children," British Journal of Educational Psychology, 28:201-208, November, 1958.

deWitt, Fred, "The Measurement of Values by Means of Analysis of Judgments," Ph.D. dissertation, University of Illinois, 1955.

Edel, Abraham, "Concepts of Values in Contemporary Philosophical Value Theory," Philosophy of Science, 20:198-207, June, 1957.

Engbretson, W. E., "Values of Children: How They Are Developed," Childhood Education, 35:248-251, February, 1959.

Fensterheim, H. and M. E. Tresselt, "The Influence of Value Systems on the Perception of People," Journal of Abnormal and Social Psychology, 48:93-98, April, 1953.

Mahan, T., "Human Judgment: Can the Classroom Improve It?," Journal of Educational Research, 49:161-169, November, 1955.

Moore, B. M., "Adults Look at Children's Values," Childhood Education, 32:257-261, February, 1956.

Morris, Nelle, and others, "How We Work on Developing Value Judgments," Educational Leadership, 16:224-227, January, 1959.

Morris, Richard T., "A Typology of Norms," American Sociological Review, 21:610-613, October, 1956.

Newsome, G. L., Jr., and H. W. Gentry, "Values and Educational Decisions," The National Elementary Principal, 42:42-67, November, 1962.

Perkins, F. T., "Research Relating to the Problem of Values," California Journal of Elementary Education, 23:223-242, July, 1961.

Phenix, Philip H., "Values in the Emerging American Civilization," Teacher College Record, 61:355-377, August, 1962.

Prince, Richard, "Student Value Judgments Do Differ in Public, Religious, and Private Schools," *Phi Delta Kappan*, May, 1959.

Ramsey, Charles E. and Laurey Nelsen, "Change in Values and Attitude Toward Family," *American Sociological Review*, 21:605-609, March, 1956.

Raths, James, "Clarifying Children's Values," *The National Elementary Principal*, 42:35-64, November, 1962.

Raths, L. E., "Sociological Knowledge and Needed Curriculum Research," *Research Frontiers in the Study of Children's Learning*, James D. MacDonald, Editor, School of Education, University of Wisconsin, Milwaukee, Wisconsin, 1960.

Raths, L. E., "Values Are Fundamental," *Childhood Education*, 35:246-247, February, 1959.

Rose, Arnold M., "Sociology and the Study of Values," *British Journal of Sociology*, 7:1-17, March, 1956.

Rosenberg, Milton J., "The Experimental Investigation of a Value: Theory of Attitude Structure," unpublished Ph.D. dissertation, University of Michigan, 1953.

Rothman, Philip, "Socio-Economic Status and the Values of Junior High School Students," *Journal of Educational Sociology*, 28:126-130, November, 1954.

Ryan, F. J. and J. S. Dance, "Social Acceptance, Academic Achievement, and Academic Aptitude Among High School Students," *Journal of Educational Research*, 52:221-225, November, 1958.

Vaughn, Lawrence E., "Relationship of Values to Leadership, Scholarship and Vocational Choice," unpublished Ph.D. dissertation, University of Nebraska Teachers College, 1959.

Willard, Ruth A., "A Study of the Relationship Between the Valued Behaviors of Selected Teachers and the Learning Experiences Provided in Their Classrooms," *Journal of Educational Research*, 49:45-51, September, 1955.

Winter, William D., "Student Values and Grades in General Psychology," *Journal of Educational Research*, 55:331-333, April, 1962.

APPENDIX A

TABLES

Table 1A

Family Situation of Seniors by Schools

Schools	Person(s) with whom student lived							
	Both parents		Father		Mother		Other	
	n	%	n	%	n	%	n	%
0	53	82.8	3	4.7	6	9.4	2	3.1
1	104	80.6	2	1.6	18	13.9	5	3.9
2	86	83.5	3	2.9	8	7.8	6	5.8
3	110	84.6	3	2.3	10	7.7	7	5.4
4	66	80.5	6	7.3	8	9.8	2	2.4
5	167	83.9	6	3.0	19	9.6	7	3.5
6	145	91.2	8	5.0	4	2.5	2	1.3
7	221	86.7	5	1.9	21	8.2	8	3.2
8	146	81.1	3	1.7	26	14.4	5	2.8
9	55	85.9	0	---	7	10.9	2	3.1
Total	1,153	84.5	39	2.9	127	9.3	46	3.4

Table 2A

Frequency of Church Attendance of Seniors by Academic Achievement

Frequency of church attendance	Grades								Total
	A		B		C		D		
	M n=45	F n=52	M n=220	F n=330	M n=390	F n=259	M n=42	F n=24	
	%	%	%	%	%	%	%	%	%
Weekly	55.6	65.4	44.1	53.6	31.5	43.2	23.8	20.8	42.8
Semi-monthly	6.7	9.6	9.1	7.3	10.0	7.7	11.9	---	8.6
Monthly	8.9	3.8	5.5	6.7	5.1	5.0	4.8	16.7	5.9
Seldom	13.3	15.4	20.5	22.4	27.4	30.1	23.8	37.5	24.7
Never	15.6	5.8	19.5	9.7	25.9	13.1	35.7	25.0	17.7
Blank	---	---	1.4	0.3	---	0.4	---	---	0.4

Table 3A

Comparison of Academic Achievement of Seniors with Occupation of Father

Occupation of father	Grades								Total
	A		B		C		D		
	M n=45	F n=52	M n=220	F n=330	M n=390	F n=259	M n=42	F n=24	
	%	%	%	%	%	%	%	%	%
Manual, unskilled	4.4	11.5	11.4	10.3	15.4	14.3	4.8	20.8	12.6
Manual, skilled	11.1	13.5	9.5	13.9	15.6	17.8	23.8	4.2	14.5
Lower white-collar	22.2	19.2	20.5	23.3	26.2	23.6	21.4	29.2	23.6
Upper white-collar	22.2	5.8	23.2	16.7	12.6	13.1	4.8	8.3	15.1
Artisan*	---	1.9	1.4	4.8	1.5	2.7	---	---	2.4
Merchant*	15.6	9.6	8.6	9.7	7.7	12.7	16.7	8.3	9.9
Farmer*	2.2	11.5	6.8	3.0	4.4	3.9	---	12.5	4.5
Professional*	4.4	9.6	3.6	2.7	4.1	1.5	4.8	---	3.4
Professional**	8.9	9.6	7.3	8.2	2.8	2.7	4.8	---	5.3
Executive	---	3.8	3.2	3.0	1.8	0.8	---	---	2.1
Blank	8.9	3.8	4.5	4.2	7.9	6.9	19.0	16.7	6.7

*self-employed
**salaried

Table 4A

Comparison of Academic Achievement of Seniors by Level of Employment of Father

Level of employment	Grades								Total	
	A		B		C		D			
	n	%	n	%	n	%	n	%	n	%
Manual[a]	20	5.4	126	34.0	204	55.1	18	4.9	368	27.1
White-collar[b]	33	6.2	228	43.2	246	46.6	20	3.8	527	38.7
Self-employed[c]	20	8.7	95	41.3	103	44.8	12	5.2	230	16.8
Professional[d]	18	12.3	77	52.7	47	32.2	4	2.7	146	10.7
Other	6	6.6	24	26.4	49	53.8	12	13.2	91	6.7
Total	97	7.1	550	40.3	649	47.6	66	4.8	1362	

[a] Includes unskilled, semi-skilled, and skilled labor.

[b] Includes lower and upper white-collar workers.

[c] Includes self-employed, artisan, merchant, and farmer.

[d] Includes self-employed and salaried professionals and executives.

Table 5A

Comparison of Academic Achievement of Students Having Fathers Employed at the Various Occupational Levels

Level of occupation	Grades A n=97	 B n=550	 C n=649	 D n=66	Total n=1,362
	%	%	%	%	%
Manual	20.6	22.9	31.4	27.3	27.1
White-collar	34.0	41.5	37.9	30.3	38.7
Self-employed	20.6	17.3	15.9	20.8	16.8
Professional	18.6	14.0	7.2	6.1	10.7
Other	6.2	4.4	7.5	16.7	6.7

Table 6A

Comparison of Academic Achievement of Seniors in Each Curriculum

Curriculum	Grades A n=97	 B n=550	 C n=649	 D n=66	Total	
	%	%	%	%	n	%
College	82.5	74.2	31.4	19.7	706	51.7
Business	6.2	16.0	23.9	19.7	262	19.2
Vocational	3.1	3.3	5.7	6.1	62	4.5
General	5.1	5.3	33.4	33.3	273	20.0
Don't know	3.1	1.3	5.5	21.2	62	4.5

Table 7A

Comparison of Academic Achievement of Seniors by Socio-Economic Level of Chosen Occupations

Category of occupational choice of student	Grades								Total	
	A		B		C		D			
	n	%	n	%	n	%	n	%	n	%
Manual	1	1.5	11	16.9	49	75.4	4	6.2	65	4.8
White-collar	47	6.4	309	42.1	353	48.1	24	3.3	734	53.8
Self-employed	2	4.3	4	8.5	35	74.5	5	10.6	47	3.4
Professional	31	15.3	115	56.7	53	26.1	4	2.0	203	14.9
Undecided	16	5.1	111	35.1	159	50.3	29	9.2	316	23.1

Table 8A

Comparison of Academic Achievement of Seniors With Post-High-School Plans

Plans	Grades								Total	
	M	F	M	F	M	F	M	F		
	n=45	n=52	n=220	n=330	n=390	n=259	n=42	n=24		
	%	%	%	%	%	%	%	%	n	%
Military	6.7	---	2.7	---	10.8	0.4	21.4	4.2	62	4.5
Farming	4.4	---	0.9	0.3	2.1	0.4	4.8	---	17	1.3
College	88.9	94.2	90.0	90.6	68.7	74.9	42.9	45.8	1080	79.1
Job	---	3.8	1.4	3.0	6.4	8.5	9.5	29.2	74	5.4
Don't know	---	1.9	4.1	6.0	11.8	15.8	21.4	20.8	131	9.6
Blank	---	---	---	---	0.3	---	---	---	1	0.1

Table 9A

Comparison of Rating of Occupational Values by Academic Achievement and Sex

(Percent rating value important)

Occupational values	Average grades received								Chi square	
	A		B		C		D			
	M	F	M	F	M	F	M	F	M	F
	%	%	%	%	%	%	%	%		
Leader	73.3	21.2	49.1	29.1	40.9	18.1	50.0	25.0	5.749	9.905*
Interesting	97.8	98.1	94.5	97.3	94.4	94.2	95.2	87.5	---	---
Esteem	68.9	53.8	69.5	59.4	56.8	55.9	64.3	70.8	---	---
Boss	48.9	5.8	30.0	7.9	29.7	6.9	38.1	16.7	---	---
Security	57.8	61.5	82.3	76.1	88.2	88.0	88.1	87.5	47.265**	18.203**
Expression	88.9	98.1	92.3	95.5	89.3	93.1	80.9	87.5	---	---
High pay	64.4	23.1	52.7	32.7	55.2	41.3	59.5	45.8	3.148*	9.382*
Fame & worth	73.3	53.8	62.3	52.7	63.2	52.1	59.5	54.2	---	---
Help others	75.6	90.4	71.8	92.4	70.1	91.5	66.7	91.7	---	---
Independence	54.3	53.8	50.5	49.1	52.9	46.3	69.0	41.7	---	---

*significant 5% level
**significant 1% level

Table 10A

Occupational Values of Seniors by Socio-Economic Level of Family

(Percent rating value important)

Occupational values	Socio-economic level - (father's occupation)								Chi square	
	Manual		White-collar		Self-employed		Profes-sional			
	M	F	M	F	M	F	M	F	M	F
	%	%	%	%	%	%	%	%		
Leader	40.6	19.2	43.9	24.4	53.3	24.0	58.7	38.0	9.81*	10.67*
Interesting	91.9	93.4	97.5	97.2	91.4	96.0	96.0	95.8	---	---
Esteem	57.8	58.2	64.4	59.6	61.9	55.2	65.3	56.3	---	---
Boss	28.9	8.8	26.9	6.4	41.9	8.0	34.7	9.9	8.86*	---
Security	88.8	84.1	84.5	80.4	81.9	79.2	78.7	71.8	---	---
Expression	88.8	92.3	93.2	95.6	90.5	94.4	86.7	97.2	---	---
High pay	59.4	36.3	51.4	54.4	60.0	39.2	50.7	35.2	---	---
Fame & worth	61.5	48.9	63.3	54.4	65.7	52.8	68.0	54.9	---	---
Help others	75.4	92.9	73.4	91.2	57.1	94.4	69.3	90.1	11.97*	---
Independence	52.9	47.3	51.4	46.0	59.0	48.0	48.0	57.7	---	---

*significant 5% level
**significant 1% level

Table 11A

Occupational Values of Seniors by Level of Occupational Choice

(Percent rating value important)

Occupational values	Socio-economic level - (student's occupation)								Chi square	
	Manual		White-collar		Self-employed		Professional			
	M	F	M	F	M	F	M	F	M	F
	%	%	%	%	%	%	%	%	%	%
Leader	34.4	25.0	42.7	22.6	59.1	---	54.5	31.6	70.99**	---
Interesting	93.4	75.0	95.6	96.9	90.9	100.0	97.6	97.4	---	---
Esteem	60.7	100.0	56.4	57.9	70.5	66.7	72.1	63.2	8.21*	---
Boss	27.9	---	28.9	7.1	45.5	---	35.8	5.3	---	---
Security	90.2	100.0	87.6	81.7	86.4	100.0	81.8	71.1	---	---
Expression	83.6	75.0	92.0	93.9	86.4	100.0	93.9	97.4	---	---
High pay	54.1	50.0	49.8	35.0	59.1	33.3	60.6	44.7	---	---
Fame & worth	68.9	25.0	61.8	53.9	63.6	33.3	64.2	55.3	---	---
Help others	72.1	100.0	73.3	93.3	61.4	100.0	75.8	86.8	---	---
Independence	52.5	25.0	50.2	47.4	59.1	33.3	55.8	50.0	---	---

*significant 5% level
**significant 1% level

Table 12A

Mean Traditional-Value Scores by School, by Sex, by Year

School	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
0	32.75	33.28	31.31	31.43	32.03	32.35
1	33.39	32.30	31.63	32.75	32.39	32.56
2	32.56	34.29	29.29	35.54	31.22	34.81
3	33.43	31.13	35.51	34.51	34.30	32.56
4	31.98	29.13	30.92	32.16	31.48	30.54
5	30.53	31.19	28.45	32.03	29.49	31.61
6	35.88	35.89	35.18	33.53	35.55	34.78
7	32.20	30.47	30.98	34.44	31.56	32.54
8	32.51	30.82	32.04	33.12	32.29	31.91
9	32.61	32.61	30.16	32.32	31.42	32.47
Total	32.73	31.96	31.53	33.32	31.15	32.63

Table 13A

Mean Traditional-Value Scores by Sex and Grades

Grades	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
A	36.66	34.07	34.54	35.23	35.30	34.69
B	33.94	33.99	32.37	34.52	33.06	34.31
C	31.69	31.15	29.91	31.54	30.97	31.30
D	31.49	26.76	28.78	31.96	30.60	28.65
Total	32.73	31.97	31.51	33.33	32.14	32.63

Table 14A

Mean Traditional-Value Scores by Sex and Curriculum

Curriculum	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
College	34.00	33.67	32.88	34.28	33.44	33.96
Business	30.20	30.86	30.54	32.74	30.47	32.33
Vocational	33.31	30.52	30.73	32.86	32.74	31.05
General	30.42	30.14	29.39	31.56	29.99	30.62
Don't know	31.67	28.18	28.33	31.39	30.16	29.11
Blank	33.60	---	32.29	---	32.83	---
Total	32.73	31.96	31.53	33.32	32.15	32.63

Table 15A

Mean Traditional-Value Scores by Sex, Year, and Church Attendance

Church attendance	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
Weekly	34.42	34.26	32.83	34.38	33.59	34.33
Semi-monthly	32.20	32.94	31.08	32.79	31.60	32.88
Monthly	31.79	30.82	27.68	33.38	29.74	32.15
Seldom	30.69	30.69	28.91	32.06	29.87	31.38
Never	30.23	29.53	31.08	31.61	30.47	30.17

Table 16A

Mean Traditional-Value Scores by Post-High-School Plans

Post-high-school plans	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
Military	31.62	30.63	---	---	31.63	30.66
Farming	30.62	30.47	---	---	30.88	31.18
College	33.56	32.91	31.92	33.79	32.69	33.36
Job	28.50	27.35	29.00	32.45	28.81	30.11
Undecided	31.40	28.17	30.35	29.93	30.87	29.07
Total	32.72	31.96	31.51	33.32	32.13	32.63

Table 17A

Mean Traditional-Value Scores by Father's Occupation

Category of father's occupation	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
Manual	32.06	32.60	29.96	32.63	31.07	32.49
White-collar	32.53	31.68	32.61	33.82	32.57	32.72
Self-employed	32.79	32.81	31.45	33.42	32.09	32.83
Professional	35.05	32.03	31.87	33.63	33.43	32.33
Blank	34.48	29.42	33.11	32.47	33.77	---
Total	32.73	31.96	31.53	33.32	32.15	32.63

Table 18A

Mean Traditional-Value Scores by Sex, Year, and Student Occupational Choice

Category of student occupational choice	Male		Female		Total	
	1963	1966	1963	1966	1963	1966
Manual	29.51	29.52	31.80	---	29.64	29.75
White-collar	32.84	33.18	30.96	33.23	31.51	33.22
Self-employed	34.78	31.50	---	---	34.93	31.23
Professional	34.15	33.23	35.03	36.29	34.33	33.80
Undecided	31.13	30.43	31.91	32.86	31.49	31.30
Total	32.73	31.96	31.50	33.34	32.15	32.63

Table 19A

Mean Traditional-Value Scores of Seniors by Type of Community in Which They Lived

Community type	Male	Female	Total
Industrial	31.59	32.34	31.98
Agricultural	32.44	33.03	32.71
Suburban	30.75	34.04	32.35
Total	31.43	33.30	32.34

APPENDIX B

DESCRIPTION OF SCALES

DESCRIPTION OF SCHOOLS

OCCUPATIONS SCALE

Manual: Semi- and Unskilled

Domestic, hod carrier, gardener, janitor, laborer, machine operator, mechanic's helper, seamstress, truckdriver; Army private, private first class, corporal, airman; Navy seaman.

Manual: Skilled

Baker, carpenter, electrician, forester, painter, printer, repairman, sheet-metal worker, welder, machinist, plumber; Army technical and staff sergeant; Navy petty officer.

Lower White Collar

Bartender, beautician, bookkeeper, bus driver, camp counselor, copy draftsman, dance instructor, driver-salesman, fireman, foreman, guard, inspector, laboratory assistant, model, nurse's assistant, policeman, postman, practical nurse, professional athlete, psychiatric technician, technician (electrical, photographic, radar), union official, waiter; Army master or first sergeant, warrant officer; Navy chief petty officer, warrant-bosun; Coast Guard mate.

Upper White Collar

Adult education, commercial artist, buyer, cartoonist, claims adjuster, dress designer, material designer, dietitian, draftsman, FBI, librarian, assistant sales manager, office manager, musician, nurse, pilot, city playground director, police chief, police captain, probation officer, purchasing agent, salesman, social welfare worker, teacher, technician (chemical, dental, laboratory), forest ranger, professional entertainer, newspaper writer, fish and game warden; Army lieutenant, captain; Navy chief warrant officer, ensign, lieutenant.

Self-Employed Artisan

Barber, carpenter-contractor, dog trainer, gardener, jeweler, mechanic, nurseryman, piano tuner, plumber, shoemaker, taxidermist.

Self-Employed Merchant

Broker, contractor, druggist, export-import business, mortician, retail store owner.

Self-Employed Farmer

Farmer-rancher, horse breeder, or trainer.

Professional: Salaried

Criminologist, editor, engineer, journalist, judge, minister, missionary, professor, researcher, school principal, school district superintendent, statistician-chief accountant, pharmacist, chemist; Army major, colonel; Navy commander, captain.

Professional: Self-Employed

Architect, author, certified public accountant, dentist, auto designer, doctor, lawyer, psychiatrist, veterinarian.

Executive

Production engineer, sales engineer, corporation executive, governor, management counselor, sales manager, manufacturer's representative, senator, university officials; Army general; Navy admiral.

T. Bentley Edwards and Alan B. Wilson, "Orientation of Occupation," A Study of Some Social and Psychological Factors Influencing Educational Achievement; Department of Education, University of California, Berkeley, California; June, 1961; p. B-17.

DESCRIPTION OF DVI SCALES

The Differential Values Inventory produces scores for traditional and emergent values. Each of these main scores is derived by the summing of scores from four subscales. The traditional subscales are Puritan morality, work success, individualism, and future-time orientation. The emergent subscales are sociability, moral relativism, conformity, and present-time orientation.

Puritan Morality

Persons with high scores on this scale tend to be thrifty, respectable citizens in the community, and show great respect for their elders. They epitomize the early Puritan philosophy of self-denial, sexual constraint, and guilt feelings when doing or having done something against this philosophy.

Work Success

High scorers respect hard work and the satisfaction which hard work brings them. Basic beliefs of this philosophy are statements such as "successful people work hard to become so," and "anyone can get to the top if he tries hard enough." To these persons, success is a constant goal; resting on past glories has no place, no role in their future success. They must work continuously to convince themselves of their worth.

Individualism

High scores indicate a belief in the individual and in individual rights and freedom. The individual is sacred and is generally more important than the group. In one extreme form, this value sanctions egocentricity, expediency, and disregard for another person's rights. In its healthier form, however, the value promotes independence and originality.

Future-Time Orientation

Persons with high scores tend to believe that the most important consideration is the future, not the past or even the present. If future satisfactions are to be gained, present needs and desires must be denied. Some characteristic remarks of high scorers' attitudes are: "Time is valuable and cannot be wasted"; "A penny saved is a penny earned"; and "What do you want to be when you grow up?"

Sociability

High scorers value people; being with people and liking them are highly important. They believe that success is highly dependent upon whom one knows. Loners and solitary activities are looked upon with suspicion.

Moral Relativism

Persons scoring high on this scale tend to question absolutes in right and wrong. Nothing is black or white; most answers are gray. Morality is what the group, not the individual, thinks is right.

Conformity

High scorers relate everything to the group; the ultimate goals are harmony and compliance with the group. Nothing should be done without regard for others and their feelings. No one should be "different."

Present-Time Orientation

High scores on this scale indicate a desire to have fun and enjoy the present. The general attitude is that no one can foresee what the future will hold so a person should therefore make the most of his life now. High scorers hold the hedonistic belief that pleasure is the chief goal in life.

SCHOOLS IN SAMPLE

Selection of Schools

All high schools within a 150-mile radius of Davis were divided into three groups: small, enrollment less than 500; medium, enrollment 500-1000; and large, enrollment over 1000. The following three schools were chosen for study from each of the categories: Small Schools, Colusa Union High School, Colusa; Lincoln Union High School, Lincoln; and Rio Vista Joint Union High School, Rio Vista. Medium schools: John Swett Union High School, Crockett; Lincoln Union High School, Stockton; and Sonoma Valley Union High School, Sonoma. Large schools, San Ramon Valley Union High School, Danville; Roseville Joint Union High School, Roseville; and San Juan High School, Citrus Heights. A medium-sized parochial school, St. Mary's High School in Stockton, was later added to the sample for comparative purposes.

Each school in the initial selection cooperated in the study and remained in the study throughout the four years. During this period, only three schools changed head administrators, and since the new heads also gave their full cooperation, continuity was not lost.

The High School Communities

Agricultural Centers

The county seat of Colusa County, Colusa, has a population of about 3,500, and is the center of county government and service center for a prosperous agricultural area. The basic occupations include agriculture owners-operators, agricultural laborers, and white collar workers, either self-employed or connected with the county government. The school growth is about 5 percent per year, and a new high school has been built from a 1962 bond election. General community interest in education and the high school is high. The assessed valuation per student is $38,000.

Lincoln was established as the terminal point for the east-side railroad ten miles north of Roseville, and, as the railroad expanded north, in 1875 a Mr. Gladding discovered excellent clay deposits which provided the town with a new industry which is still the mainstay of the economy of the town. The main occupations in the town are skilled and unskilled labor, connected with Gladding-McBean Clay Products Company, and agricultural laborers or small farm owners in the surrounding area. The school has an assessed valuation of $27,000 per student, with an enrollment increase of 20 percent per year. The general interest in education and the school is somewhat apathetic, as shown by the poor history of bond and tax elections.

Rio Vista is about 40 miles south of Sacramento, on the Sacramento River. Established and known for many years as a fishing center and a departure point for agricultural products from the Delta, Rio Vista is still the center of an agricultural district. Thirty years ago, natural gas was discovered in great quantities in surrounding areas, so petroleum products now play an important economic part in the small community. Blackwelder Brothers, developers of the mechanical sugar beet harvester and, recently, a mechanical tomato picker, have established a manufacturing plant in Rio Vista. Because of the land value, the assessed valuation per student is $114,6000, and the school district therefore has the lowest tax rate of any of the sample schools. The growth rate of the school is less than 5 percent per year. The basic occupations are agricultural labor and white and blue collar workers. Most citizens are permanent; migration, such as is found for seasonal agricultural jobs, is virtually nonexistent.

Sonoma, the Bear Flag City, located in the Valley of the Moon, is well known as the center of the California wine industry. Yet, very little wine is actually made in Sonoma. Dairies are prominent in the nearby areas, and milk products are shipped to markets in the San Francisco Bay Area. Once a purely agricultural center, Sonoma is undergoing rapid transition to a small-acreage residential area housing technicians from the Sonoma State Hospital, professionals, and white-collar workers from the Bay Area, and retired persons from all walks of life. The assessed valuation of $8,811 per student is by far the lowest in the sample schools. General community interest in educational programs is conservative, and progress is slow. The school experiences a large turnover in enrollment each year, as families who have come to harvest fruits move on to other picking areas.

Industrial Towns

Crockett, on the Carquinez Straits, is supported solely by oil and sugar refineries in the town and school district. The population consists of skilled and unskilled laborers working largely for C & H Sugar, Union Oil, Pacific Gas & Electric Company, and American Refineries. Welfare rolls are high. The assessed valuation per student is $67,000, the second-highest in the sample. Growth rate of the school is about 12 percent per year. The school has a small, rather inactive parent-teacher group. Most interest is in music, with a large parent group supporting the band. (They raised $9,000 in one month to send the high school band to the World's Fair in Seattle.)

The other industrial-based town is Roseville, where railroad yards and agricultural packing and shipping are predominant. Most of the citizens are employed in these industries and supporting businesses. The Southern Pacific Railroad employs about 850 persons, with an annual payroll of about $4 million; the Pacific Fruit Express claims the world's largest ice plant, producing 400 tons of ice a day to refrigerate fruit cars. With the extension of the Sacramento freeway in recent years, Roseville is fast becoming another bedroom area for Sacramento businessmen and surrounding military-base personnel. The growth rate of the school is about 10 to 15 percent per year. A second high school has been established to handle the increased school enrollment. The town's general interest in education and the high school is good.

Residential Communities

Citrus Heights is a suburb of Sacramento, a purely residential area with no major industries. The growth rate of the San Juan High School is about 12 percent per year. The assessed valuation per student is $20,631, but this is based on the total San Juan School District, and basic large industries, financially supporting the school through property taxes, are located elsewhere in the district. The general community is interested in education and the school itself, and the PTA group is quite active. Parents are employed in the upper white-collar occupations at Aerojet-General and Mather and McClellan Air Force Bases, all of which are located out of the local school district. With most of the parents employed by these space-age and governmental enterprises, mobility rates and student turnover are higher than in the other sample schools.

Danville, in the San Ramon Valley, was once the heart of a small, profitable fruit and nut raising area. Bay Area professionals and executives have found the valley to be a quiet, restful, and pleasant place to live; acre lots encroach upon the few farms left. A few miles away are plants of Aerojet-General, Pieper, and General Electric, employing some residents and also supplying monies for the school via property taxes. The school growth rate is about 15 to 20 percent annually, and another high school has been established to house the increased student enrollment. The assessed valuation per student is $27,119 and parental interest in education is strong and active. Business executives are promoted and transferred to other cities, so the population is mobile and school turnover is apparent and expected.

Another bedroom community is Lincoln Village, in Stockton. Professionals, business owners, and government white-collar workers are the residents--virtually no laborers live in this area. There is no industry in the school district, and the assessed valuation per student is therefore low--$23,000. Parental interest in education is strong. A very active PTA group and a $4.5 million bond election in 1959 to provide a new school attest to that interest and support. Lincoln is the only school in the sample with flexible scheduling and extensive team-teaching. As in Danville, mobility is fairly high, as executives are promoted and transferred.

St. Mary's High School is located two miles from Lincoln Village, but the students travel great distances to the parochial school. The "district" includes the area from Sacramento to Modesto to Oakland, so the parental occupations are somewhat more varied than in Lincoln: professionals, farmers, and laborers. School financial support is based on a yearly tuition and various fund-raising activities. There is no growth rate, for the school has a maximum-capacity enrollment: only 3 percent dropout from freshman to senior years. Parental interest and support are very active and strong.

APPENDIX C

COPIES OF INSTRUMENTS

University of California, Davis
Form 65

DIFFERENTIAL VALUES INVENTORY

INSTRUCTIONS

You are being requested to participate in a research study conducted by the University of California, Davis. The information you provide will be seen only by the research personnel. We want your sincere answers. Complete all of this instrument.

The Differential Values Inventory* consists of a number of statements about things which you may think you ought or ought not to do or feel. This is not a test. There are no right or wrong answers. If you have doubts about some statement, choose the one which seems closest to what you believe.

1. The statements are arranged in pairs.

   EXAMPLE: 1. (0) I ought to be reliable.
   (1) I ought to be friendly.

2. Select the one which is more important to you personally and put "0" or "1" on the answer sheet. Do not mark the booklet.

3. Read each set of items carefully. When reading the items to yourself, precede each statement by "I ought to . . ." Do not skip any items.

*Developed by Richard Prince, University of Chicago, 1958.

Precede each statement with the phrase "I ought to ..."

1. (0) Work harder than most of those in my class.
   (1) Work at least as hard as most of those in my class.

2. (0) Do things which most other people do.
   (1) Do things which are out-of-the-ordinary.

3. (0) Have my own ideas about politics and religion.
   (1) Try to agree with others on these matters.

4. (0) Enjoy myself doing things with others.
   (1) Enjoy myself doing many things alone.

5. (0) Attain a higher economic position than my father or mother attained.
   (1) Enjoy more of the good things of life than my father and mother enjoyed.

6. (0) Feel that the future is uncertain and unpredictable.
   (1) Feel that the future is full of opportunities for me.

7. (0) Feel that happiness is the most important thing in life to me.
   (1) Feel that enduring suffering and pain is important for me in the long run.

8. (0) Rely on the advice of others in making decisions.
   (1) Be independent of others in making decisions.

9. (0) Feel it is my duty to save as much money as I can.
   (1) Feel that saving is good but not to the extent that I must deprive myself of all present enjoyment.

10. (0) Put all of the ten dollar bill I have in the bank.
    (1) Spend five of the ten dollars enjoying myself with my friends.

11. (0) Spend enough on clothes to dress as well as my friends.
    (1) Spend only enough on clothes to look presentable and save the rest for future needs.

12. (0) Put in long hours of work without interruption.
    (1) Feel that I can't work long hours without stopping but I'll get the job done anyway.

13. (0) Feel that it is most important to live for the future.
    (1) Feel that today is important and I should live each day to the fullest.

14. (0) Feel that "right" and "wrong" are relative terms.
    (1) Feel that I should have strong convictions about what is right and wrong.

15. (0) Work hard to do most things better than others.
(1) Work hard at some things and leave others to those who are more qualified than I.

16. (0) Feel that everyone misbehaves once in a while but the important thing is not to make the same mistake over again.
(1) Feel that the most important thing in life is to strive for eternal peace.

17. (0) Feel that work is important, fun is not important.
(1) Feel that all work and no play is not good for me.

18. (0) Feel that what others think about right and wrong should influence my thinking.
(1) Feel that my own convictions about right and wrong are most important.

19. (0) Defend my ideas about right and wrong.
(1) Be willing to be convinced on matters of right and wrong because "right" and "wrong" have different meanings for different people.

20. (0) Make as many social contacts as possible.
(1) Be willing to sacrifice myself for the sake of a better world.

21. (0) Get all my work done on my own.
(1) Get my work done with the help of others when necessary.

22. (0) Wear clothes similar to those of my friends.
(1) Dress moderately even though this makes me different from my friends.

23. (0) Work hard only if I am paid for it.
(1) Work hard at doing something creative regardless of pay.

24. (0) Get a job which will allow me to enjoy some of the luxuries of life.
(1) Get a job which will make me a success in life.

25. (0) Be able to solve difficult problems and puzzles.
(1) Feel that difficult problems and puzzles are good for some people but are not for everybody.

26. (0) Feel that style is more important than quality in clothes.
(1) Feel that quality is more important than style in clothes.

27. (0) Say what I think is right about things.
(1) Think of the effect on others before I speak.

28. (0) Feel comfortable getting the same grades as most of the other people in my class.
(1) Feel comfortable near the head of the class.

29. (0) Have my own firm ideas about correct behavior.
(1) Look to others for the kind of behavior which is approved by the group.

30. (0) Feel that discipline in the modern school is not as strict as it should be.
(1) Feel that the change from strict discipline in the modern school is a good one.

31. (0) Feel that the most important thing in school is to gain knowledge useful to me in the future.
(1) Feel that the most important thing in school is to learn to get along well with people.

32. (0) Do things without regard to what others may think.
(1) Do things which allow me to have fun and be happy.

33. (0) Take classes which are interesting to me whether or not they will do me some good in the future.
(1) Register for a class which is uninteresting to me but which will do me some good in the future.

34. (0) Go to a school affair to enjoy myself being with people.
(1) Go to a school affair because it is my duty to be loyal to my school.

35. (0) Feel it is right to spend less for clothes in order to save for the future.
(1) Feel that whether one wants to spend more for clothes and save less or vice versa is a matter of opinion.

36. (0) Do things very few others can do.
(1) Do things cooperatively with others.

37. (0) Use the same expressions my friends use so that they won't think I'm odd.
(1) Speak in the most proper manner.

38. (0) Feel that it is right to save for the future.
(1) Feel that whether or not it is right to save for the future is up to the individual.

39. (0) Choose a job with opportunities for advancement even though the starting pay isn't as high as I would like it to be.
(1) Choose a job in which I can work with many interesting people.

40. (0) Mix a little pleasure with my work so I don't get bored.
(1) Keep at a job until it is finished.

41. (0) Get as much pleasure as I can out of life now.
(1) Stand by my convictions.

42. (0) Feel that everybody misbehaves once in a while but the important thing is not to make the same mistake twice.
    (1) Feel guilty when I misbehave and expect to be punished.

43. (0) Have less freedom in the classroom.
    (1) Have more freedom in the classroom.

44. (0) Be very ambitious.
    (1) Be very sociable.

45. (0) Choose a job in which I'll earn as much as most of my friends.
    (1) Choose a job with plenty of opportunities for advancement even though the pay isn't as high as my friends receive.

46. (0) Get the kind of job which will bring me in contact with many interesting people.
    (1) Get the kind of job which will make me a success in life.

47. (0) Feel that whether or not it is right to plan and save for the future is a matter of opinion.
    (1) Feel that it is right to plan and save for the future.

48. (0) Be willing to sacrifice myself for a better world.
    (1) Feel it is important to behave like most other people do.

49. (0) Deny myself enjoyment for the present for better things in the future.
    (1) Have fun attending parties and being with people.

50. (0) Be satisfied to do as well in life as my father did.
    (1) Attain a higher position in life than my father did.

51. (0) Feel that it will be good for me later if I endure some unpleasant things now.
    (1) Feel that whether or not I should be willing to endure unpleasant things now because it will be good for me later is a matter of opinion.

52. (0) Be able to have most of the things my friends have.
    (1) Be able to have enough money to lay away for future needs.

53. (0) Feel that happiness is the most important thing in life.
    (1) Feel that being respected is the most important thing in life.

54. (0) Feel that more physical punishment is needed by children today.
    (1) Feel that physical punishment does the child more harm than good.

55. (0) Exert every effort to be more successful this year than I was last year.
    (1) Be content with a reasonable amount of success and live longer.

56. (0) Try very hard to overcome my emotions.
    (1) Get as much pleasure as I can out of life now.

57. (0) Feel it is important to be more successful this year than last year.
    (1) Feel it is important to get along well with others.

58. (0) Feel that children are born good.
    (1) Feel that children are born sinful.

59. (0) Spend as much time as I can working independently.
    (1) Spend as much time as I can in having fun.

60. (0) Deny myself enjoyment for the present for better things in the future.
    (1) Be able to have as much enjoyment as my friends have.

61. (0) Feel that it is right to be very ambitious.
    (1) Feel that it may or may not be right to be very ambitious depending on the individual.

62. (0) Choose to work with people I like in a job I don't like.
    (1) Choose to work with people I don't like in a job which I like.

63. (0) Work as hard as I can in order to be successful.
    (1) Work as hard as I can in order to enjoy some of the luxuries of life.

64. (0) Strive to be an expert in at least one thing.
    (1) Do many things quite well but not necessarily be an expert in anything.

OCCUPATIONAL VALUES INVENTORY

(Record your answers on the answer sheet. Do not mark this booklet.)

How important to you is each of the following items in deciding the job or occupation you plan for your life's work?

1. A job where you could be a leader.
   0. Important
   1. Not important

2. A very interesting job.
   0. Important
   1. Not important

3. A job where you would be looked upon very highly by your fellow man.
   0. Important
   1. Not important

4. A job where you could be boss.
   0. Important
   1. Not important

5. A job you are absolutely sure of keeping.
   0. Important
   1. Not important

6. A job where you could express your feelings, ideas, talents, or skills.
   0. Important
   1. Not important

7. A very highly paid job.
   0. Important
   1. Not important

8. A job where you could make a name for yourself and be recognized for your worth.
   0. Important
   1. Not important

9. A job where you could help others.
   0. Important
   1. Not important

10. A job where you could work more or less on your own.
   0. Important
   1. Not important

11. Which of the above items (#1 to #10) is the most important to you when selecting an occupation?

12. Which of the above items (#1 to #10) is the least important to you when selecting an occupation?

STUDENT BACKGROUND INFORMATION

(Record your answers on the answer sheet. Do not mark this booklet.)

1. What is your father's (step-father's, guardian's) occupation?

2. What occupation do you want for your life's work?

3. Where do you live?
   0. In town
   1. On a farm

4. With whom do you live?
   0. Both parents
   1. Father
   2. Mother
   3. Foster parents
   4. Other

5. How often do you attend church?
   0. At least once a week
   1. Twice a month
   2. About once a month
   3. Several times a year
   4. Never

6. High school course you are taking:
   0. College preparatory
   1. Business, commercial, secretarial
   2. Vocational
   3. General
   4. Don't know

7. What kind of grades do you receive in school?
   0. Mostly A's
   1. Mostly B's
   2. Mostly C's
   3. Mostly D's
   4. Below D

8. How much does your mother work outside the home for pay?
   0. Part time
   1. Full time
   2. None

9. What do you plan to do after graduation from high school?
   0. Go into the military service
   1. Go into farming
   2. Go on to college, junior college, business college, or beauty school
   3. Get a job wherever I can
   4. Undecided or other

TEACHER INFORMATION

(Record your answers on the answer sheet. Do not mark this booklet.)

1. In which subject area do you primarily teach?

   1. Science - Math
   2. Language Arts
   3. Vocational
   4. Social Studies
   5. Art - Music
   6. Physical Education
   7. Business

2. What is your age?

   1. 20 - 29 years
   2. 30 - 39 years
   3. 40 - 49 years
   4. 50 - 59 years
   5. 60 - 70 years

3. Years teaching experience:

   1. 0 - 4 years
   2. 5 - 9 years
   3. 10 - 14 years
   4. 15 - 19 years
   5. 20 - 24 years
   6. Over 24 years

4. Frequency of church attendance:

   1. At least once a week
   2. Twice a month
   3. Once a month
   4. Seldom
   5. Never